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RINGWORM
AND SOME OTHER SCALP AFFECTIONS.

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SOME OTHER SCALP AFFECTIONS

THEIR CAUSE AND CURE

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PREFACE.

My object in presenting this short contribution is to show that while devoting every attention to the pathological aspects of a disease one may neglect other aspects, the study of which may be much more important if a successful treatment is to be discovered. General conditions must be taken fully into account, as well as local signs, if any prophylactic treatment is to be of use, and if a cure is to be rapid and permanent.

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RINGWORM AND SOME OTHER SCALP AFFECTIONS,

THEIR CAUSE AND CURE.

INTRODUCTORY.

No scalp or skin affection has received more attention from general practitioners and specialists than ringworm; not only because it is a comparatively common affection, but because so many cases are eminently obstinate in the face of all ordinary and many extra-ordinary methods of treatment. There is, therefore, no wonder that many books have been written on the subject—most exhaustive, most learned, and bearing every evidence of untiring energy and patient skill.

But we learn from the best of these authorities that they are still very far from being masters of the affection; that, in fact, they are still as nonplussed as ever medical men were, to all intents and purposes. It is true that new local treatments have been adopted from time to time, and that each of these has appeared to be, up to a certain point, in certain cases, and after a certain time, successful; yet there can scarcely be any other skin affection that has brought down upon itself so many and varied pharmaceutical products and still so resolutely refuses to be comforted. Ringworm has distinguished

itself. Is there any caustic or irritant, excitant or vesicant, parasiticide or stimulant that has not been tried—anything short of the actual cautery and the knife? Notwithstanding all this, there are still three, six, nine, twelve, and twenty-four month types, and many apparently incurable ones, left to consult us in all the despair of their parents' long-suffering.

This is an interesting affection, that causes such an amount of literature and presents such difficulties, that yields quite amply to the investigations of the microscope, and yet so persistently declines to be exorcised. So interesting is it that one is almost led to believe that there has been a certain amount of boring for milk at the thick side of the cocoa-nut shell, as one might say.

These are the days of micro-organisms, in all good sooth. Hunting for organisms has now come to be looked upon as the only procedure worth anything in the face of any medical and surgical problems which do not give themselves up kindly and quickly to satisfactory solution. And it is well, *from one point of view*, that this should be so. We certainly cannot know too much about anything. We cannot safely afford to relax our energies in microscopical research, in the face of the multitude of diseases and affections that stands ever ready to assault the system on any favourable occasion. Investigate! Investigate! is the word of command that is more emphatically and loudly uttered than ever by those waging war against life's impalpable and insidious enemies. "Get at the root of the matter," is the short and simple

exhortation of keenly-observant pathologists and cunningly-astute bacteriologists. Find out the micro-organism, and the thing is done : this would almost appear to be the paramount guiding and encouraging sense of what should be done, if one come to criticise the tendencies of present day labour in medical and surgical fields.

But is there nothing else to be done besides catching your bird and putting salt on its tail ? Does this act represent the be-all and end-all of our investigating instincts and prowess ? Are we simply to nail our organism to the laboratory table and proceed to scientific assemblies triumphant and rejoicing ? Have we done devising methods of fighting disease when we have found the organism and a means of killing it ? Surely not !

With our disinfectant shrapnels, our maxim-medicaments, our shell-specifics, we are indeed well armed ; this no one could deny ; but can we not discover something more about the *casus belli*, and learn what it is that has induced the enemy to aggression ? Can we not devote more attention to the grievances, soils, or grounds on which hostilities have been founded, and so obtain a prophylactic or bud-nipping command over any embroils or disturbing dissensions that may rise ?

Suppose we turn our attention, for a time, not quite so much to an examination of martial microbes and of the best instruments of warfare with which they may be met, but more to the grounds of complaint. Perhaps we may thus be able to settle disputes easier,

without so much clangour of weapons. Let us endeavour to get out of an atmosphere of so much ill-temper and disappointment ; it is possible we may obtain peace with a much less bloodthirsty retaliation if we look well into both sides of the question ; if we thoroughly investigate the cause and nature of the complaint before taking up arms ; if we carefully examine the soil or grounds of disease before we begin our campaign against organisms ; let us rest for a moment in our scheming and inventing of new systems and engines of warfare, in order to get breath and recover our senses.

To know the nature of a people from whom hostile squadrons happen to spring, is to win a battle almost at its very inception, or even to prevent it ; the word of a sober government can send distant legions to their tents, and can hoist the white flag. So the general state of the body can give its word of command to local disease ; it can counteract further ravages, and even quell the very commencement of disorder ; it can do so by rendering the soil or condition of parts incapable of sustaining any form of micro-organism activity or growth.

Now, almost the whole of ringworm literature may be characterized by one word ; it is essentially Pathological. Pathology and statistics, bad results and shattered hopes ; upon such is based an eternal therapeutic theme with variations. *Hinc illæ lacrymæ.* Nothing new has been brought forward in the way of local application that has given very much better results than many others that have been previously

tried for this affection. Theorising there has been no end of ; but any new treatment of real practical worth has not yet been discovered.

It will be the object of the following pages to show that there has undoubtedly been a good deal of splendid work done, and very thorough investigations made respecting the pathology, etiology, and treatment of the affections under notice, but it will be argued that the labour has been too much of a one-sided nature for any chance of a really valuable conclusion being arrived at. The life-history of micro-organisms, their correct classification and accurate differentiation, the scope of their ravages and extent of their proliferation, their destruction by agents applied under certain conditions and in certain ways—these things may be known, and thoroughly well known ; but it is quite evident there is not enough comprehended concerning the circumstances under which particular micro-organisms may live and thrive, and under which they may languish and die when nothing is done locally.

One need only have one datum, eschewing all microscopic assistance entirely, simply relying upon clinical observation alone, and a valuable lesson is learnt at once: Ringworm is sometimes subject to what has been described as spontaneous cure. After perhaps many months of mixed treatments, everything failing, cases have been known to get well when left entirely alone. Now, the importance of this fact cannot be over-estimated. Not only have such cases shown the utter inefficacy of the different

treatments administered, but they have pointed out that there is another, of quite a different nature, that may be successful. They have not got well of themselves, these cases of spontaneous cure ; it is a great mistake to suppose they have. Probably such an idea has been the means of certain important sides of various questions being so neglected. Something has caused the cure, and it therefore remains for us to find out what that something is, if it can be found out. It has not been through faith or miracle working ; it has been due to certain forces that a check has been brought about, forces inherent in the general state of the system.

But there are also other data from which we can arrive at some conclusions. Cures of ringworm have followed, or accompanied, altered states of general ill-health : it therefore remains for us to ascertain, if we can, what has been the precise nature of these states. Cures have been effected through change of climate or district. We have, then, to find out what such changes of environment have done to exercise such a beneficial influence. And some cases of very rapid disappearance have been observed, due to the administration of medicines internally ; here again we must examine into the immediate and indirect effects of these agents.

A study of the subject of ringworm in particular is also helped in an interesting and convincing manner by observations that have been made, and by results that have been obtained, in the treatment of some other affections of the skin, particularly alopecia areata and impetigo. There are circumstances sur-

rounding these affections which offer a most interesting suggestion at first, and a positive conclusion afterwards, that certain states of the system are favourable to the growth of each one, or of more than one at the same time, as the case may be. Towards this conclusion several authors have borne some sort of testimony, though not with any clearness. It is also highly probable that the soils for the growth of each of these affections are alike in *most* respects, and some may be exactly the same. Not only have I considered, through clinical observation of cases, that a somewhat similar soil undoubtedly exists for each affection, as shown by signs and symptoms, but a certain treatment that has been adopted with success has also pointed to the same conclusion.

Hence, with interesting facts gleaned from pure and simple clinical observation, and with a number of results that have been astonishingly rapid, under a certain treatment to be explained, I feel that I can afford to practically ignore, with every respect, the lessons from the bacteriological laboratories that have been set forth in so many heavy volumes. The value of these I would not dream of discounting, any more than I would the immense benefits that have been derived from wisely and humanely-conducted vivisection. I am quite well aware that such patience and skill as has been displayed by prominent members of the profession in investigating the etiology of ringworm would be beyond any energetic ability of mine, and would exhaust all my perseverance and powers of application ; but, notwithstanding, this slender volume

shall take its chance beside heavier tenants of the bookshelves of those who want results in their practice. I could not pretend to belittle pathological evidence, and the inestimable advantage which it gives us in our battle against disease in general; but I am bound to insist that it is possible for everything to be known about certain micro-organisms, while the disease they cause cannot be successfully combated; and, on the other hand, it is equally possible for nothing to be known concerning the micro-organisms, when a treatment may be adopted that is quickly master of the situation.

CHAPTER I.

SOME SIGNS AND SYMPTOMS.

THE common affection named ringworm is one that takes its seat in areas of the scalp more often than anywhere else. Caused by parasites, it shows characteristics that are easily recognized ; for its fungus or mould nature prompts it to proliferate and involve the skin and hair, while it causes an irritation and some slight amount of inflammation. The disease spreads outwardly from the initial spot, and so the patches formed by it are more or less circular, generally ; and they have been described as being ring-shaped because of the marked redness that is generally to be seen on the outside edge, the greatest activity prevailing there.

If the fungus first attack the skin of the head, very soon it spreads to the hairs also, and it is owing to this fact—very largely—that ringworm of the head has been found so difficult to treat *locally*. The parasite gets into the hair shaft and distributes itself about the hair root in a manner that is most forbidding to any surface treatment.

A good deal has been written about the way in

which the hair itself is attacked, and conclusions have been arrived at which may be to a certain extent interesting but which do not, I am of opinion, serve a very markedly beneficial purpose, viewing the diseased spots as I do. The simple fact that both the skin and hair are attacked, and also the roots of the hair, is all that seems really necessary to know if one does not preserve a very good opinion of epilation as a method of treatment.

Many pages have also been written by authors, and much discussion brought about, respecting the precise order of attack that the fungus takes, whether it encounters skin or hair first; but it scarcely seems sufficiently important that such a question be completely fathomed. What can it seriously matter whether the fungus attack hair or skin first?

The hair when affected with the disease breaks off, leaving characteristic stumps—it *may* be important to know this for purposes of diagnosis in doubtful cases—and this breaking off of the hair results in the development of more or less bald circular patches on the head.

The redness and ring shape of the patches are best seen on the body, because the area is clearer to the view, not being shaded or screened by stumps, debris, and hair. Some authorities state that the red periphery of a head patch is rarely seen, however, though they fail to explain that this most active portion is, as often as not, partly hidden under either comparatively sound or only slightly damaged hair.

In general practice, where rapidity of diagnosis is

often of importance, ringworm is perhaps more readily recognized when a reddened periphery can be found. But such a sign is not valuable on this account alone; it serves as an indication to the mother or nurse of a child where the active mischief lies. The precise value of such a knowledge will be pointed out under the chapter on treatment.

Very often a reddened edge may not be found: so much the better for the patient, for even if the fungus be not altogether inactive in such a case, the circumstances indicate that a rapid cure is very likely to follow, under proper treatment.

CHAPTER II.

PATHOLOGY.

I do not intend to ignore the pathological aspects of the subject absolutely, as the introduction might imply; there must always be some amount of such evidence to lend interest, if nothing else, to the study of all ailments and diseases, scalp affections included. Yet for the strict purpose I have in view, there need be no particular reference to micro-organisms beyond this, that different kinds have been found.

After the discovery that the micrococci of diphtheria may be found in the throats of those who are quite well of the disease, who shall say that fixing the microbe is everything if we want to treat a case successfully? The fact is, so much attention to pathological aspects and evidences has led to insufficient observation regarding other characteristics of more than one form of disease. Not that pathological teachings are of little value in themselves; they are of the utmost importance, of course—who could deny this? However, the whole story as regards ringworm, up to the present, has been one of pure and simple work with lens and microscope,

while the concluding chapters of ponderous volumes have been devoted more to a dismal record of failure in treatment than to anything else.

What has been done in the way of pathological investigation? The most finite and reliable researches have brought us to this end: the "plurality of the fungi" causing ringworm has been established beyond a doubt. But is this such a very great discovery? One eminent authority has even prosecuted such profound clinical observation and research as has enabled him to record "that since these discoveries were published, I have not found two forms of tinea on the same scalp."

Certain British authors have expressed themselves to be "entirely at variance with continental writers who dispute the plurality of the ringworm parasite;" and they follow Sabouraud "in considering these groups to be the outcome, not of the vagaries of one fungus, but of three, and probably several, distinct species, and remarkably stable species."¹ After such conclusions who shall step in to say one word more or to criticize at all the advances that have been made in the *pathological* study of this troublesome and persistent skin trouble?

It is therefore an established fact that the fungi causing ringworm are of different kinds. But this has been found interesting rather than useful to us, and it has given us material for comparison with the kinds and effects of those micro-organisms that are

¹ "The Plurality of the Fungi causing Ringworm." Brit. Jour. of Derm. July 1896.

concerned with several other diseases ; it may help us to understand moreover that everything does not depend on the organism, and that is why I mention it and dwell upon it awhile. Various species of ring-worm fungi no doubt have a predilection for certain sites, and they themselves display slightly different characteristics : for instance, the *Trichophyton megalosporon ectothrix* is found generally in ring-worm of the body, while the commonest fungus attacking the head is the *Microsporon Audouïni*.

CHAPTER III.

ETIOLOGY.

CAUSED by the growth of a fungus on a favourable soil, ringworm is contagious. It passes from one child to another if the latter happen to possess a suitable degree of receptivity in its skin. The rubbing of heads together, as might occur when children play with one another, will convey the spores of ringworm, by way of example; and the disease may also be transferred by brushes or towels.

Very often no source of contagion can be found. This is not surprising when we consider that all kinds of micro-organisms may exist in superabundance in regions where they are not able to take root and declare themselves. There cannot be any doubt that in the case of ringworm, as with several other diseases and affections, many people may have micro-organisms all round them, but few will possess a soil that will allow them to take root. It is a favourable soil for growth that is, after all, the chief necessity.

When any typically contagious and infectious disease has been distinctly observed, without a shadow of doubt, to pass from one person to another, we have no right to overlook the fact that the soil has

been of the same favourable description in each case, or the transference would not have been effected ; and, more, these same soils have very often been prepared and made ready in precisely the same manner—and even sometimes under the same roof, in the case of children of the same father and mother, the latter having also had strong tendencies to hand down to their offspring.

To be sure of fuller understanding, therefore, in our future study of ringworm, we must devote some attention to soils. We have now learnt quite enough of parasites, and have filled volumes with accounts of them, and to be quite honest we have not been particularly successful with our past methods of treatment, after all. It is quite clear that greater attention should be devoted to other sides of the question. There is still some excuse left for research scholars, however, if they like to go on ; we cannot know too much pathology and bacteriology. The work is fascinating, no doubt ; but it is perilously absorbing if it prevent due attention being paid to other aspects.

Some readers might perhaps imagine that due attention has already been given to soils by various investigators ! Let us see for a moment what some of the highest authorities tell us and try to settle this question.

Aldersmith writes :¹ “ All children do not appear to be equally susceptible to ringworm. A certain unknown condition of the skin is necessary for the growth of the fungus, as some children do not take ringworm, though constantly exposed to infection.

¹ “ Ringworm,” p. 37.

For it is evident, that when one child in a family has ringworm, and is untreated, the others are very likely to be exposed to the action of the fungus; yet, at times the disease does not extend; though as a rule it does, unless precautions be adopted."

"The fact that brothers or sisters, in a family with one chronic case of ringworm, remain free from the complaint, is often used as an argument by parents, to prove that their child is not suffering from any contagious form of disease, and is in a fit condition to attend school."

"In some children the fungus takes but slight hold, and is easily destroyed; while others are extremely susceptible, the disease quickly attacking the hairs, and spreading with great rapidity, even under good treatment. Sometimes inappropriate treatment, by producing impetiginous eczema with crusts, even accelerates the already rapid spread of the complaint; and by means of the pus, the fungus is carried to more distant and healthy parts. This variety of ringworm is difficult to manage."

"The difference in these cases, when due to the same species of fungus, must depend on some peculiar nutritive condition of the soil or material in which it develops, or upon some special state of the general health or constitution. In fact, the state of the soil is a most important condition, and is hardly dwelt upon sufficiently by some observers, for the rapidity with which a small spot of ringworm spreads, before it comes under efficient treatment, depends chiefly upon a peculiar suitability or unsuitability of the soil. In

some children it appears singularly conducive to the rapid growth of the ringworm fungus; and it has been stated that ringworm specially occurs, and spreads most rapidly, among poorly nourished children of a strumous or lymphatic diathesis. At times, it is observed that all the children in a family of this description, if they become infected, will suffer severely, evidently showing that there is some general constitutional condition present favouring the parasitic growth."

"It has generally been taught that ringworm is more commonly seen amongst those who, while they are not decidedly strumous, are yet thin and pallid and sickly. · Malcolm Morris wrote in 1881, that children with very light brown, golden or colourless hair, with gray or blue eyes, and with fine skin with thin epidermis, take ringworm easily, and usually have it severely."¹

"There is little doubt that we do see more cases of ringworm in fair-haired children than in dark. Crocker attributes this to the fact that light-haired children predominate in England; but as Malcolm Morris says: 'Crocker, however, admits that in dark-haired children the hair resists the invasion of the fungus more than in others.'"

"I still maintain the opinion I expressed many years ago: that the peculiar condition of the soil which is favourable to the development of the ringworm fungus is unknown, and that it is not due to any known constitutional cause."

"Lancet," January 29th, 1881.

" My own opinion is, that the general health, and the colour of the hair, have nothing to do with ringworm, as I constantly see both recent and chronic forms in children who are neither serofulous, strumous, nor ill-nourished; in fact, it is common in decidedly healthy and robust children, even 'in those who are the picture of rosy health.' "

" Another curious fact about the soil is, that when puberty is reached, about the age of from fourteen to fifteen, ringworm of the scalp becomes much more manageable; and even when it has existed for years, generally gets well spontaneously soon after that period. Also it is very rarely contracted after twelve or thirteen (small spore), or after fourteen or fifteen (large spore)."

" What is the cause of this? What happens at this time to the skin, or the hairs, that prevents the fungus from living? It cannot be, as some have suggested, that the fungus cannot enter the hair shaft, for it does involve it in some rare instances in adults. But even if this were true, this fact could not kill the fungus already existing in the hairs. Even if they are saturated with the fungus, ringworm almost always gets well spontaneously from about fifteen to sixteen. I have not the least idea to what this death of the fungus is due, and only wish it could be discovered, for it might be possible to artificially produce this condition of the scalp, on the hairs, and then one of the most obstinate of skin affections would be rapidly and surely cured."

Jameson says: " It is especially in anaemic, fair and

lymphatic children that ringworm of the head is obstinate.”¹

Malcolm Morris also writes: “The affection, however, is purely local, and I attach more importance to peculiarities of structure in the epidermis and the hairs, than to the condition of the patient’s health. Some of the most persistent cases that have come under my notice have been in perfectly healthy children.”²

According to Tilbury Fox, children with *chronic* ringworm dislike fat; and, he says, this avoidance of fat in the diet “has a most potent influence in leading to the development of a condition of nutrition which is favourable to the occurrence of obstinate ringworm.”³

Crocker also agrees that “there is no known constitutional or other condition of the patient to be made out that predisposes to ringworm, though there is no doubt that some people are more susceptible than others.” . . . “I have,” he writes, “met with it in an extremely developed and obstinate form in perfectly healthy children, both fair and dark; so that while it is always right to attend to any defect of the general health, I could never convince myself that the progress of the disease was materially influenced by such measures.”⁴

Thin also remarks: “While delicate children are

¹ “Diseases of the Skin,” p. 559.

² *Ibid.*, p. 310.

³ “Ringworm.”

⁴ “Diseases of the Skin,” p. 813.

as liable to the disease as others, yet perfectly healthy children with excellent constitutions are equally liable to it.”¹

Duhring writes: “A certain state of the epidermis, or soil, the exact nature of which is obscure, is required for their [the fungi] development, without which favourable condition they fail to take root and grow, or at least to thrive.”²

Now a better idea than is conveyed in the above could not be given, in a small space, of the opinions and theories that are at the present time held regarding the human soil or ground for cultivation of ringworm fungus. We have the conviction of one high authority that “the affection is purely local;” while another, equally researching, observant, and persevering, gives his opinion that the general health has “nothing to do with ringworm,” and with these—perhaps the greatest authorities—many others readily agree.

Nearly everyone however is inclined to admit that there is “a curious fact about the soil; a certain state of the epidermis, the exact nature of which is obscure,” and so on, but no one is prepared to commit himself with the smallest speculation regarding what the particular condition of the soil is, and how it is produced. Aldersmith and Malcolm Morris peremptorily repudiate the idea that the growth of the fungus has anything to do with the general health.

In our criticism, let us take particular notice, for

¹ “Pathology and Treatment of Ringworm,” p. 23.

² “Cutaneous Medicine.”

a moment, of the reasons why these great authorities have come to such a conclusion. Malcolm Morris writes: "Some of the most persistent cases that have come under my notice have been in perfectly healthy children." And Aldersmith records the fact that he constantly sees "both recent and chronic forms in children who are neither scrofulous, strumous, nor ill-nourished; in fact, it is common in decidedly healthy and robust children, even in those who are the picture of rosy health." Perhaps these extracts do not give the only reason of the experts named for their convictions; but they are sufficient for my purpose; they present at least what is doubtless the chief reason.

Now I must ask this question, with every deference: How have Malcolm Morris and Aldersmith *known* that some of their cases have enjoyed faultless general health? Have they not only merely *supposed*, from appearances, and from the absence of marked and definite signs and symptoms of disease or ailment that no dyscrasia was present? Contrary to the opinions of many authorities, I beg humbly and respectfully to show in the following pages that not only is the general health of importance, but that it has *practically everything* to do with ringworm, favus, alopecia, impetigo, tinea versicolor, and even with the existence of pediculi capitis or corporis.

Of a truth, "things are not what they seem." It is true that children may look markedly scrofulous, strumous, or ill-nourished; but who shall say that those who do not *look* so are not labouring under any

condition of ill-health? Struma is only known, after all, by the signs and symptoms it produces; but its tendency is also there in some degree before these evidences have made their appearance.

The failure to treat ringworm successfully in the past has been solely due to the want of recognition, on the part of observers, that a certain state of the whole system influences the skin, and renders it favourable to the growth of fungus. The highest in the profession have failed in their treatments: we must admit this when we read records which show that some patients have been under treatment for months, many months, and often years; and more especially must we admit it on reading accounts of cases that have undergone *spontaneous* cure after a varied and exhaustive treatment of many months, or even a year or two, has been persisted in and *finally given up altogether*. Such failures could have no other explanation than that given.

The "pictures of rosy health" have done it. They have, without any doubt, altogether masked that very state of general ill-health without which ringworm would be an unknown quantity. But, still, it must be admitted that this masking of ill-health by the cheeks has not stood entirely alone as a cruel deception; for ringworm has been too often observed amongst the obviously unhealthy for cheeks to have their own way in the argument. However, a glowing countenance on the one hand and pale anaemic features on the other have, between them, deliberately thrown dust in the eyes of the deserving researcher. They

have compelled him to perhaps the only really definite and certain conclusion—next, it may be, to “plurality of fungi”—to be found in the whole of ringworm literature, viz., that the general health has nothing to do with the affection. No firmer conviction could be found, unless it be one expressed in the words of Dr. Aldersmith, who writes the following in 1880, and repeats it in 1897: “The simple and plain truth is that there is not a single plan, except the use of strong caustics which will form scars, which can be relied on with absolute certainty to cure ringworm of the head.”

It is fairly well recognized, when considering certain diseases, that we must not judge altogether from *appearances* what the state of the general health or ill-health may be. Take the tendency to tubercle, for instance: some children who ultimately contract tubercle may be seen to be fat and rosy cheeked. A pale face is not always pathognomonic of phthisis; it may be a feature of chlorosis or convalescence from several different kinds of disease. And the countenances of those suffering from ringworm have not been uniformly healthy looking; only *some* cases have appeared to be in the very best state of health; but these have been sufficient to seriously mislead.

Although a good many cases have come under my notice exhibiting marked signs of general ill-health, several others have had the robust appearance noted so particularly by other observers. And, what is also worth bearing in mind, the latter have generally been referred to by their parents as ever showing signs of

being in the best of health: this further evidence might be rightly calculated to mislead still more. Nevertheless, a close clinical study of ringworm ultimately led me to the firm conviction that the general health was at fault in *all* instances, notwithstanding, and that the soil, favourable to fungus growth, was one to be changed to an unfavourable one by medicinal and other means.

I had made a point of treating the general health of all sickly-looking cases, taking into careful account the symptoms of ill-health that each happened to manifest; and having found a medicine that brought good results in the majority of cases, I did not hesitate to exhibit the same to those who *appeared* quite well; with the result that I obtained similarly satisfactory and rapid cures in them also. Hence I was obliged to conclude that my surmise was correct, that a form of general ill-health was the prime essential for the growth of ringworm fungus—provided any micro-organic units were present to promote initial activity—whether the ill-health were obvious or no. Further results at length went to show that the presence of ringworm was in every case the very strongest, and even quite indisputable, evidence of defective general health; and, moreover, the internal administration of drugs, giving good results, confirmed in each instance the correctness of the diagnosis.

I look upon ringworm, then, as a sign of defective general health, whether there be any other signs and symptoms or not. And should we not have every reason to view with favour this theory, even if it could

not be really proved a fact? Do we not know that every fungus growth is prompted by certain temperatures, atmospheres, and moistures? Then why should we have been so tardy and hesitating about the etiology of ringworm. Having recognized this affection as a mould, it should have seemed likely that it would flourish in favourable soils, and that these soils would be produced in certain ways. A cheese may turn mouldy, but it must be in a favourable state for the suitable organisms to flourish, which state is regulated by circumstances of time, air, temperature, and moisture ; and so with bread or anything else.

There are certain conditions of ill-health which may be analyzed, or which may have their character rendered definite and obvious, by watching the effects of particular medicinal preparations administered. Syphilis may be suspected: there may be some reason for ascertaining whether a subject has had this disease; or it may be that the failure of certain treatments on a doubtful diagnosis has prompted the medical adviser to try for syphilis, as it were. And how does he do this? He gives some potassium iodide; and if he improves or cures his case, he is able to name the disease, perhaps a brain gumma. So well is the action of this drug known, when there is not the remotest trace of syphilis of the palpable or superficial kind in a subject, and when certain symptoms do not yield to other measures, that very often potassium iodide is fallen back upon as the most useful diagnostic and therapeutic agent.

And, now, tuberculin is used for the detection of

tubercle. Quite accidentally discovered as a diagnostic agent, it has come to be one of considerable value.

I myself have found out the cause of asthma in several cases by the administration of drugs primarily directed against *apparently* irrelevant symptoms; and I have traced some throat troubles back to their true origin through casually treating distant symptoms that have *appeared* to have nothing to do with the main trouble.

Similarly, I found that certain forms of iron help one to diagnose the state of the general health. And I came to the conclusion that if certain general measures help towards obtaining a rapid cure of ringworm—and by cases I shall show that they do—they diagnose at the same time a defective state of the system. At the present moment I look upon the treatment of the general health to be by far the most important point to attend to in cases of ringworm, alopecia areata, favus, impetigo, tinea versicolor, and pediculi capitis. These affections to me are no longer specific; they are significant and pathognomonic of what I shall choose to call a fungus or mould dyscrasia; they are signs of ill-health.

The reader must not misjudge the principles advanced above. I do not advocate the indiscriminate and regardless administration of drugs for the deliberate purpose of diagnosing all doubtful diseases. I have merely found out the value of some drugs when given for certain diseases, through having administered them on account of what have appeared

at first to be intercurrent or subordinate complaints in the same subject; and others have done the same in other departments. Some of my readers might be inclined to question my form of procedure in investigating etiologies, if I did not thus explain myself.

In passing, one cannot help but observe how circumambient, and to some extent faithful, Aldersmith's remarks are, yet slightly contradictory, regarding the question of soil. In one part of his book he says, "the difference in cases, when due to the same species of fungus, must depend on some peculiar nutritive condition of the soil or material in which it develops, or *upon some special state of the general health or constitution:*"¹ and further on he gives it as his opinion "that the general health, and the colour of the hair, have nothing to do with ringworm."² Elsewhere he expresses himself thus: "The peculiar condition of the soil which is favourable to the development of ringworm fungus is unknown: it is not due to any known constitutional cause."³

The ideas and theories of authors distinctly denote that the signs and symptoms of ringworm, as they view them, are eminently confusing; and it is not difficult to see why they are confusing. When certain cases of ringworm are examined in a consulting room or school, that are *apparently* in the very best of health—and when all the simpler evidence points to this being the case—while others who stand by are sickly looking, what else can be said regarding the general health other than it can be of no account?

¹ "Ringworm," p. 38.

² *Ibid.*, p. 40.

³ *Ibid.*, p. 40.

But it so happens that appearances deceive, as they assuredly have deceived experts in the treatment of ringworm.

One cannot help admiring the insistent sense of Aldersmith when he writes that "the state of the soil is a most important condition, and is hardly dwelt upon sufficiently by some observers, for the rapidity with which a small spot of ringworm spreads, before it comes under efficient treatment, depends chiefly upon a peculiar suitability or unsuitability of the soil." Though this question forces itself upon us: Why has he not been able to arrive at any further conclusions regarding soil, with the prodigious amount of material he has had to work upon?

CHAPTER IV.

DIAGNOSIS AND PROGNOSIS.

ALDERSMITH begins the third chapter of his book on ringworm thus: "There is no disease of the skin in which so many mistakes are made in diagnosis as in ringworm of the scalp. When the results of such errors are considered, it is surprising that all medical men, who at any time may be called upon to give certificates, or to treat ringworm, do not thoroughly acquaint themselves with the simple facts concerning diagnosis, and also with the exact condition which constitutes 'a cure' of this most troublesome of complaints. Errors are very frequently made, and children with well-marked tinea tonsurans are often certified by medical men to be cured, and not to be suffering from any contagious complaint, and, therefore, returned to schools, when they are, in fact, suffering from chronic ringworm, which is certainly very contagious."

Now, I think that a cool asseveration on my part that ringworm practically requires no diagnosis will be read with a surprise amounting to stupefaction by adherents of the old school. By no diagnosis I mean

that one only wants such normality of vision as will enable one to detect small areas on the scalp that are more or less denuded of hair, and that show no signs of new hair growing but rather of old hair breaking off, and with a full and correct history of the case we have quite enough to get on well with. If common interest should lead an enthusiast to examine the periphery of the patch for signs of activity he would not be to blame, but he certainly need not get a lens out.

For what else can these bald patches be? If we employ a system of exclusion and bring possibilities down to a point, we shall see that very few conditions bring about rounded spots of baldness or deficiency of hair growth. We might perhaps name cicatrices, syphilis, eczema, ringworm, alopecia areata, or impetigo, as being more or less likely to be misjudged. Now, the first should have plenty of confirmatory evidence in the history if hunted for, even if local examination of the hair with the naked eye were not sufficient. Alopecia areata may generally be quite easily distinguished by the naked eye; but age and history will help a great deal in distinguishing it. Impetigo is like nothing else; and it matters not in the slightest whether ringworm complicates it or not in view of the treatment that I adopt, so that I never trouble to ascertain how much there is of one or the other complicating. The dyscrasia I know to be *practically* the same, whether the local affection is single or compound, and the treatment will eradicate all that is there, for a certainty; hence my utter indifference as to micro-organisms, in simple practice.

For preventing any spread to others, of course I would advise isolation—even in doubtful cases; as it ought not to be necessary for long. And any heads that are suspected should be searched for the smallest spots—if there are no large ones. I can conceive it possible for a lens to be found of use under such circumstances, and I would recommend those who have particular reasons for searching out earliest spots to consult the works on ringworm of Aldersmith and Malcolm Morris. But the treatment I myself adopt discounts urgency, allays anxiety, and exercises a safe and rapid command in ordinary cases, while very few extraordinary ones are worth the name.

• The searching for any signs or symptoms should mainly be conducted for the purpose of diagnosing and discriminating underlying dyscrasias: that is the point I wish particularly to emphasize. Let us look for spots, large or small, not so much for the purpose of diagnosing merely these themselves, but that we may be able to distinguish the dyscrasia they belong to—whether it might be that of syphilis, or one which is commonly attractive to fungi.

Internal medicines and certain principles of living prove to be the best diagnostic agents for fungus dyscrasia, after all. Naturally, if certain drugs are administered and they give satisfactory results, then one cannot help being more or less “wise after the event.” There are certain principles of living, to be named later on, that will of themselves diagnose fungus dyscrasia; they will distinguish it

when they cure it. But we ought rarely to have occasion to use these methods of diagnosing; they are really only given here for didactic purposes.

I consider that ringworm and impetigo indicate of themselves the existence of a mould dyscrasia, but I shall show that particular medicines and methods of treatment, by their action on this derangement, prove its presence even when no other sign or evidence of it but the scalp spots may be found, that is to say, when the patients seem to be "the picture of rosy health."

The diagnosis that is concerned with the possible presence of pus need scarcely be mentioned, though the necessity for particular local treatment will be rendered clearer by the recognition of such a complication. General treatment being of paramount importance in all cases, however, no matter what may be the precise character of the local scalp signs, all scrupulously accurate diagnoses will appear to be so much like industry beside the main point.

In view of the treatment I am in the habit of adopting for all fungus affections, it is not in the least necessary to laboriously differentiate between the microsporons and trichophytons; treating local fungus manifestations as merely signs, I simply have to diagnose the dyscrasia and the rest goes without microscopical proof.

One need hardly mention that any tender and swollen glands of the neck ought to claim the most careful attention: there are few indications of children's ill-health that are more misleading and more

commonly misunderstood. I have known cases of torticollis due to tender glands—which have resulted from some undemonstrative ear or throat mischief—treated for many months for spinal disease; the general condition all the while getting worse, through the youngsters being confined in badly ventilated rooms, in order to be “kept warm.” But still more commonly have I observed swollen glands of the neck diagnosed as scrofulous, and treated for such, when certain conditions of the scalp have been the cause. It should be a law that all cases presenting painful or enlarged glands of the neck should have their scalps examined carefully for any spots—and they may only be very small. I recollect a single spot on the head, half the size of a pea, causing tender and enlarged glands in the neck; and this spot only seemed to be of a simple pustular nature, disappearing in a day or two, after being kept moist with boracic ointment, which permitted the discharge to run away and not be pent up by any thick incrustation so favoured by hair.

Impetiginous spots, ringworm, and any other affections of the skin surface of the head, which also tend to develop pus or discharge, will influence the glands of the neck to some greater or less extent, almost without any exception. Points regarding the diagnosis of a dyscrasia are of real importance, while pathological hair or spore-splitting may safely be relegated to a position of quite secondary importance.

The condition kerion I consider to be merely a superinduced morbidity associated with ringworm.

Some authors refer to it as being a very desirable feature, inasmuch as its presence presages improvement and ultimate cure. Aldersmith notes that after one patch has shown the condition, and thereby has promised signs of improvement, "the rest soon follow suit, especially if the discharge from the primary patch be rubbed into other places." The probability is that kerion has been induced very largely by the drastic treatment the ringworm has formerly undergone, in nearly all instances, and also by the general unhealthy state of the parts, *at a time when the subject is under the influence of an altering dyscrasia.*

Aldersmith goes on to explain that, "If kerion be set up, the case is easily carried on to a satisfactory result, and cured by proper treatment. . . . In fact, kerion cures itself instead of spreading the disease, as does the superficial crusting form. I have seen some very extensive cases of kerion, even while very simple remedies have been applied. Some years ago I watched two young children—brothers—who had most extensive kerion, almost over the entire scalp. Both cases commenced at the same time, and in one, a subcutaneous abscess had formed before I saw the case. This was at once opened, proper treatment adopted, and almost the entire hair came away, so that the children were practically bald for a couple of months. I saw them after the hair had grown again freely, and there was a perfect recovery, except where the subcutaneous abscess had formed. Here there was a small scar left."¹

¹ Aldersmith's "Ringworm," p. 96.

The superimposition of kerion, its own cure and that of the ringworm, I hold to be an interesting, remarkable, and easily understood process of nature directed against an excessively obstinate skin affection. We know many examples which serve to illustrate that Nature herself wages war against foreign bodies and injuriously aggressive enemies of a traumatic or disease order. If a piece of wood or any such thing be driven into the body, superficially or deeply, Nature provides a salutary process by which this foreign body may be encouraged to "clear out." Inflammation and suppuration will supervene—encouraged by organisms for the purpose—and the intruder is given every chance to work away, or swim out, so to speak. Nature abhors a foreign body stuck anywhere in her masterpiece, no matter what this foreign body may be, whether a parasite, or an instrument of war, or something introduced by accident.

So, also, Nature abhors any disease or hurtful affection. It is true she cannot always accomplish her great and wonderful ends, and death may master her. But she generally tries hard. And she will work still greater wonders when properly helped. A surgeon's knife will often help Nature's own abscesses, which she herself has devised for the purpose of bringing various abnormalities round to an enduring healthfulness again.

In a like manner Nature will often try to eradicate ringworm. But she will either be very glad of any help towards her efforts to rectify the state of the general ill-health, or make an honest demand for fair play, as

the case may be. She will issue this fiat to her soldiers: Let a certain state of the general health make its appearance, if possible, either through some better method of living, or by means of medicine, or anything else that can do it; and if the condition of the parts is such that diseased or impure processes seem obstinate or reluctant to move, the spots being foul and crusted, and the surface bearing signs of severe usage, then let kerion appear and clear all away. Allow pus to enter into the contest, if necessary, commands the queen of curers; do not be beaten: and the more obstinate cases have been, and the more unsuccessful have been the treatments adopted, the more firmly and deliberately introduce your kerion.

“Spontaneous” kerion will be found in long-standing and widely-spread cases of ringworm, and it indicates a change in the nature of the dyscrasia that has been so long favouring the growth of ringworm. Alder-smith has noticed “this cure of Nature,” and has strongly advised the artificial production of kerion by croton oil, as the most rapid way to cure small places of ringworm. Why did he not try and find out how this cure of Nature came about, and how it might be helped—not by producing kerion, but by a more indirect method, by general means and medicines. Nature advises kerion, but art can “go one better,” notwithstanding.

Cases of bald tinea tonsurans seem to have caused practitioners much trouble as regards diagnosis. The appearance has been confounded with alopecia areata, and some authorities have even expressed

their opinion that both have existed in the same patches. I am of opinion that it is *possible* for ringworm and alopecia areata to be mixed, yet highly improbable ; but this is certain, that many cases which have been considered as mixed, have not been so. Instances of ringworm having passed into true alopecia areata I do not believe in. My observation instructs me that smooth, bare, and bald places will sometimes persist for a long time after ringworm has been cured, but that these have been caused by certain of the most drastic forms of treatment very often. They may resemble true alopecia areata, but that is all. I consider them to be not unlike some patches of kerion, in one respect, namely, that the peculiar character of both conditions has been in a great measure created by the kind of treatment that had been adopted against the ringworm ; though a change from marked fungus dyscrasia to sound general health, manifested throughout the whole system, provided the *vis* in by far the majority of cases. I believe that all cases of false alopecia would have been kerionised had suitable irritant applications, dirt, and organisms been present. I am prepared to admit that the artificial production of kerion and alopecia, as advocated by Aldersmith, will sometimes appear to cure ringworm ; but I shall point out presently how much the *vis medicatrix naturæ*, or even the *vis* of some accidentally-right internal medicine, has to do with the cure of many such cases. You *may* antisepticise a knife by rubbing it with an apparently clean cloth, but, supposing it had been

boiled beforehand, which process would you say had affected the real purification? You *may* burn out a spot of ringworm; but you will do better to cure out of the way the dyscrasia of it.

I entirely agree therefore with Aldersmith when he writes, "I think that those cases of alopecia, where fungus like that of ringworm has been discovered, are simply due to ringworm causing alopecia. They do not prove that ordinary alopecia areata is due in any way to ringworm."

I regard many cases that are diagnosed to be alopecia areata following ringworm as simple semi-cicatrical hairless areas due to the effect of strong local applications energetically applied. Those instances in which ringworm made its appearance again on these spots show that the fungus had either not been entirely eradicated, while the dyscrasia remained untreated and still persisted, or, that fresh contagion had been planted on the favourable soil.¹

Aldersmith refers to cases of ringworm that have come before his notice which have been supposed to be cured because hair has been found growing, but which have been still suffering from the affection notwithstanding; and he refers to the likelihood of such cases spreading the disease in schools.² In respect to such instances I would merely point out once more, that local applications have doubtless been applied with imperfect success, while a dyscrasia has

¹ See case of Fox and Blaxall, Brit. Jour. of Derm., July-September, 1896.

² "Ringworm," p. 100.

remained to provoke a recrudescence with whatever organisms have remained. Hair growth following local application is very often merely a delusion: that following proper treatment of the fungus dyscrasia is a certain sign of a commenced cure that will very soon be absolute. I repeat that to cure ringworm you must correct the dyscrasia; and you may help to clear away its signs as well, by simple local applications, if you like.

Under my treatment it matters not whether a case be of long standing or short, except that the dyscrasia of the former may be more of a chronic kind, and therefore rather more intractable to internal and general treatment. Often the most confusing and compound appearances of the scalp *seem* to be the quickest to get well, however, because their severity is more obvious to note changes upon.

Hence it will appear comparatively useless to proceed far in a consideration of diagnosis of ringworm when a fungus dyscrasia is known to be the fundamental offending condition, and when certain treatments for this dyscrasia are followed by an early disappearance of the various signs and complications that are coincident.

In some works on ringworm authors have discussed the question when the affection may be considered to be cured. The sum of their conclusions is this: that it is almost impossible to know, and that nothing can be said until a case has been examined frequently and observed over a long period. Aldersmith writes, however: "Therefore a bare

patch, left after ordinary treatment, should never be considered to be free from diseased stumps until the new downy hair is growing freely from all the follicles, without a single stump, or black dot, to be detected with a lens." This seems all well and good, and safe. But I should like to point out that a conclusion may be arrived at that is safer and more certain: If the dyscrasia is recognised and properly treated, then, a rapid general improvement taking place, an exhibition of new downy hair will indicate the certainty of a rapid and permanent cure.

The change of soil brought about by local application is not permanent, and therefore, unless the dyscrasia is treated as well, no one can give a firm prognosis of a case. But the change of soil produced by a rectification of the dyscrasia which made it promises early permanent cure. We shall not see the yellowness of jaundice go at once, immediately after we have got away the impacted stone that caused it; but we shall be quite certain that it will go before long. So we may be certain of the cure of ringworm when we have evidence that its dyscrasia is disappearing. As a rule, under my treatment, no lens examination is necessary; a glance with the naked eye every two or three days is quite sufficient: and I am not anxious about new hair growing as a rule; as long as I know that the state of the general health is changing, I am able to dismiss cases generally long before any hair has begun to grow. I know it will grow under the circumstances.

To distinguish ringworm from scurf may often be

difficult, pathologically at any rate. A history of the case will give an indication of the nature of any former methods of treatment of the scalp, and will suggest whether the condition is partly due to any of these or not, while the probability of ringworm itself having preceded the scurf will lead to a right judgment; but a careful searching after the state of the whole system will enable one to prognose if not to diagnose locally quite correctly. The plan that is an easy and a very safe one to adopt under such circumstances is therefore this: if in doubt treat the general health.

To distinguish ringworm from seborrhœa, eczema, or psoriasis ought not to be difficult, especially when the history is traced and when other signs or symptoms of fungus dyscrasia are carefully searched for; *and it must not be forgotten that all these skin affections named are themselves due to dyscrasias of some kind or other.*

Impetigo, whether simple or contagious, yields so readily to the treatment of the dyscrasia of which it is a sign—one very similar in nature to ringworm dyscrasia—that one need scarcely bother about a particularly accurate diagnosis of it. As often as not the same treatment will be rapidly effectual whether the trouble be ringworm or impetigo, or both; therefore one need not worry so very much about the micro-organisms of the situation in doubtful cases.

Favus is not hard to diagnose, neither is it particularly important that it should be, locally and accurately. As long as one can see that the condition

belongs to a fungus dyscrasia—and it scarcely matters whether this be of the English or Scottish variety—the procedure is settled. Pathologists may interest themselves further if they like; but this book, being for general practitioners and skin experts, leans particularly to the practical side, and an appreciation of its principles will make for good results in treatment, and what more need be wished for at present.

The apparent necessity for an accurate diagnosis of the scalp affections named under this heading, urged upon us by so many authors, has arisen simply on account of the almost insurmountable difficulty that has been found in treatment. Despair has driven researchers to hunting everlastingly for organisms, to the extent that the question of soil and its formation has almost been lost sight of altogether.

CHAPTER V.

OTHER FORMS OF FUNGUS AFFECTION.

VERY little need be mentioned regarding ringworm of the body. The diagnosis is simple enough, and even the pathology need not trouble any one very particularly. On account of the openness of the situation attacked, there being little or no hair, local applications are permitted to do their work very thoroughly, and altogether the circumstances do not favour that obstinate and persistent course which we have observed on the scalp when a fungus dyscrasia has taken possession.

There are one or two points, however, about ringworm of the body that are worthy of thoughtful attention. We see cases of it amongst adults who do not show any favour towards ringworm of the scalp. Now, this argues two things. Firstly, that the adult fungus dyscrasia is of a slightly different nature to that possessed by children who suffer from ringworm of the scalp. Secondly, that the contagion occasionally comes from animals, and not always from other human beings who suffer; this fact is also borne out by the kind of fungus found, which is

often of the *trichophyton megalosporon ectothrix* variety, commonly seen amongst animals.

Certain virulent and severe forms of ringworm of the body are to be seen in some foreign countries ; and their character is doubtless determined both by the kind of fungus that has taken root and by the particular soil that environment and the state of the patient's system have produced ; the nature of the soil would beyond all other things seem likely to have produced the modifications that have been observed. I have not had the opportunity of studying any of these cases, but if I am to judge from what has been written about them, I have still more valuable evidence of the fact that ringworm—attacking any region—is a sign of a fungus dyscrasia, the severity of which may be greater or less according to circumstances, and the local signs of which may be different according to the part of the world a person lives in.

Tilbury Fox writes : " It is pretty certain that these affections are nothing more nor less than ordinary ringworm of the body, such as we have in Europe, determined in their occurrence to certain parts of the body by peculiar circumstances, and assuming characters somewhat different from those observed in the disease as it exists in colder climates in consequence of the greater luxuriance of the parasite, consequent on the presence in the one case of a greater amount of heat and moisture, which are favourable to the development and spread of growth of fungi." Now, he may or may not be right in arguing that these foreign examples are those of

ordinary ringworm. It is quite *possible* that other species of fungi exist amongst human beings in other climes. Patrick Manson has pointed out that Tokelau ringworm is a specifically distinct ringworm, with a peculiar fungus. While Sabouraud's investigations show ringworm of the East to be due to many distinct species of fungus. But this is the point I wish to urge particularly: Fox has distinctly pointed to soil as having a great deal to do with the character of the affection.

Can there be any doubt whatever that some foreign examples of ringworm flourish upon soils that have been formed by dyscrasias which unusual circumstances of heat and moisture have generated, and so acquire characteristics which now and then render the affection liable to be judged as a distinct variety? Disordered states of the general health may, in some countries, be very pronounced, and much against the welfare of the individual, in various respects, and therefore, a fungus dyscrasia may also exhibit specially severe signs and symptoms. Syphilis, we know, gives different manifestations in different countries, and different degrees of severity, entirely according to race, climate, and, above all, the state of the general health.

An affection which goes by the name of eczema marginatum is most likely an ordinary body ringworm to start with, which takes on other characteristics under certain circumstances. The angry eczematous nature of it, and its tendency to spread over large areas, are characteristics which would be due to the

irritation that site, moisture, and movement combine to contribute. The soil in this instance is therefore of a compound nature, fundamentally and initially produced by a dyscrasia, and complicated by various influences.

Foreign ringworm merely provides further proof that all cases of ringworm, no matter what may be the species of fungus, or what part of the globe it may be found in, require the soil of a fungus dyscrasia, which itself may have slightly different causations, and may display varying characteristics according to circumstances.

Some observers might be inclined to argue that because Samoa was free from *tinea imbricata* until a native of Tokelau went to Samoa with the disease on him, and now it is firmly established on the island, this affection is therefore only a contagious one, and does not of necessity require a soil. But I would point out the extreme probability that a certain amount of soil was there first, or, that dyscrasias arose and increased in number as time went on, on account of either increase of population or certain altered habits of living.

It would scarcely be disputed that the dyscrasia which favoured the spread of the great plague of London is now practically unknown. If the disease could once more be started by a case or two coming from a distance, there would not, at the present day, be enough dyscrasia and soil left for it to live and spread upon. Bubonic plague lately broke out in Vienna; but depend upon it, there was some soil wait-

ing for it. Plague soils in Europe, however, are now comparatively scarce, because different environments and methods of living have eradicated many of the most virulent forms and degrees of dyscrasias. Even typhus dyscrasia—that produced by crowding and filth—is very rare in Great Britain. The East is the part of the earth where dyscrasias such as these still flourish abundantly.

Not having had much experience with sycosis or tinea barbæ in general practice, I hesitated as to whether I should include them in this book, until I perused a work on skin disease by that close and clever observer, Jameson. I then found theories and details of cases which I considered might be of use to me, as strongly bearing out my contentions regarding fungus affections in general. Sycosis itself perhaps ought not to be looked upon as a typical fungus affection; but I have chosen to give it some consideration in this chapter.

As in the case of ringworm, I do not intend to dwell upon evidences of the lens or microscope in dealing with sycosis and tinea barbæ, for I should consider I was wasting time. I will plunge *in medias res* by referring to one of the cases of sycosis which Jameson cites in his book: "M. D., aged 60, was annoyed a year before he came to me with varicose veins of the leg, and took for some time Clarke's blood mixture, a compound believed to consist largely of iodide of potassium. While he was taking this, the affection of his upper lip commenced. It is important to state, however, that his occupation

—that of a hotel-keeper—necessitated late hours and little rest at night. He came to me in 1883. The centre of the skin beneath the moustache, for a space of two inches, was thickened, red, rough, and studded with pustules, through each of which a hair passed. There was some fissured eczema of the orifice of the right nostril. He thought that this began subsequently to the affection of the lip. The lip was shaved, and completely epilated at one sitting, under chloroform, and dressed continuously with an ointment composed of equal parts of lead plaster and vaseline, spread on cotton and bound on. As he was out of condition, various tonics of iron, quinine, and strychnia were administered, and cod-liver oil prescribed. It was four months before the sycosis was cured. But he continued to shave for a year, and then all signs of the disease having long subsided, he allowed the moustache again to grow. Scarcely had he done so when the pustules commenced to reappear, and he shaved once more for eighteen months. In January, 1885, another attempt was made to allow the moustache to grow, but again the pustules appeared. Finally, he gave up business and retired to the country, and when shaving was a third time abandoned, the hairs grew luxuriantly, and no trace of pustules have since shown themselves. In this case, the care or anxiety of town life had much to do with the causation, and particularly with the perpetuation of the complaint. Once relieved from these, and in the free air of the country, the disease ceased."

In this case the man had been "annoyed a year

before with varicose veins," and while under treatment for them he contracted sycosis. His occupation necessitated late hours and little rest at night. Now could any case better suggest a predisposition or dyscrasia. And Jameson had some idea of it or he would scarcely have given the details of the patient's case so fully. But he would vouchsafe no observation as to the association of the state of the general health, which he recognized and treated, with the sycosis he was so much concerned with. He could not go so far, because he found that his treatment of the general health was unavailing and that once in the "free air of the country, the disease ceased." He could not make it out entirely: it was a mystery.

The patient undoubtedly suffered, amongst other things, from a fungus dyscrasia; this having been quickly cured by a change in the country, all signs and symptoms soon disappeared. It will be noticed, that iron, quinine, and strychnia and cod-liver oil, were administered, and in four months the sycosis was cured; but it reappeared. Occurrences like this, in the treatment of fungus affections generally, will be referred to fully under a later chapter on treatment. In one respect they appear to argue against the theory of a dyscrasia or derangement of the general health, but they are really of considerable value, as will be seen, as evidences in favour.

Another of Jameson's cases may be referred to: "A. M.; 53; a stout man, but rather soft, and not so robust as he might be. He has had the complaint for many years, and when it began he was much worried

in business." Now, take note of this man's general health and history, before going further. Everything points to a dyscrasia having been provoked by trouble and afterwards kept up by the worry concerning his affection and perhaps other matters. This man was well in about nine weeks. He was ordered cod-liver oil, which probably did some good. Several things might have helped to cure his dyscrasia, however; good hope may have been one and improvement in business another. Rest, alone, may have done a good deal. The local applications would do a certain amount of good, and the man's own enlivened spirits would act as a tonic to him. The change and exercise obtained by visits to a doctor; the doctor's cheerful optimism; such things no doubt helped. But at this stage I have merely to point out evidences that there is a dyscrasia which creates a soil suitable for the growth of sycosis and similar affections.

After giving an account of a third case, Jameson refers to the patient as being a "healthy, active man," yet he ordered him to take cod-liver oil. Now something wrong with the general health must have been suspected or cod-liver oil would scarcely have been given. The patient was a gamekeeper, and this is perhaps why he was *supposed* to be a healthy and active man. Perhaps sunburn deceived.

Jameson further writes, "there are some obstinate forms, which I have met with chiefly in those who had a scanty growth of hair on the cheeks, were anxious, and irritable. In them the disease seemed for a time cured, and then a fresh outburst of pustules accom-

panied with severe pain, would occur. No exact reason could be assigned for the recurrence, and in two cases, both of which I saw at intervals during some years, the relapses still happened when last heard of."

Anxious and irritable temperaments are symptoms of a dyscrasia. Such states of mind may be caused partly by the dyscrasia, or the dyscrasia may encourage this state of mind; and each one may influence the other at the same time. The fact that fresh outbursts of the affection occurred distinctly points to a dyscrasia as having been at the bottom of all the mischief. Local treatment was of use while it lasted, and a short time after; but the dyscrasia, being still present, lighted the affection up again. The same has been noted with ringworm of the scalp.

Jameson is of opinion that the cause of sycosis is quite obscure. "In the form which attacks the centre of the upper lip it is often preceded by nasal catarrh. In other instances depressing influences are at work,—worry, anxiety, or overwork of an uncongenial and monotonous type, with absence of fresh air; yet occasionally no such factors are traceable."¹

Jameson exhibits a far more generous and charitable tendency to examine other sides of questions in his consideration of skin diseases in general. Some authorities have only given very slight attention to the general health in their study of fungus affections; and they may have credit for even such an amount;

¹ The reader will note a strong suggestion of a dyscrasia in these lines.

they seem to have been entirely turned aside in their judgment and calculations by cases that *appeared* to be in the pink of health; and others have even come to the firm conclusion that states of the general health have nothing to do with such affections. In the study of sycosis Jameson himself even notes that "occasionally no such factors are traceable"¹—referring to indications of derangement of the general health. So, therefore, it would seem that he has not chosen to pursue the subject of soils any further, having taken things as they *seemed*. There is no doubt whatever that suitable soils did exist in all his cases, and that these belonged to dyscrasias.

It has been carefully observed by more than one expert in skin diseases that sycosis often appears to begin with a sore and running nose. This is certainly interesting. But I would venture to point out that it is as possible for a running nose to lead to sycosis, as for sycosis to induce a running nose. Who shall say which has been cause and which effect in any case that is examined? Suppose a man to be so catarrhal as to necessitate frequent rough digital attention being paid to his nose: such a man undoubtedly has some degree and kind of dyscrasia or he would scarcely have a continuously running or irritating nose; and imagine him having staphylococci under his nails or to be working amongst horses which are suffering from megalosporon ectothrix; he will often be observed to blow his nose without the aid

¹ "Skin Disease," p. 228.

of a handkerchief. Hence possibilities and probabilities of contracting either sycosis or tinea barbæ.

Concerning the cure of sycosis, Jameson writes : " The character of the complaint is obstinacy, and there is a constant danger of relapse after apparent cure. Hence no promise of a speedy cure should be made. While the general health needs attention, and, in particular, rest from anxiety should be obtained, if possible, or an entire change prescribed, the only medicine of value is cod-liver oil in full doses. This is undoubtedly useful, but it must be so administered as not to derange the stomach. Local measures are far more important." Now, the tendency to relapse which he refers to gives the strongest proof possible that a dyscrasia is the principal factor underlying this affection. The local disease is apt to show repeated recrudescences in spite of laboured local treatments. And yet such a clever observer as Jameson considers that " local measures are far more important " than any that could be directed against impaired health. How could he come to such a conclusion after such success as he noted under cod-liver oil and change of air treatments? Only on account of being over-enthused and put off the scent, while he was prosecuting his inquiries amongst the more palpable and obvious workings of local agents, one would imagine. But did he take no thought for those cases of apparently incurable sycosis which got well almost of themselves when sent for a change into the country ? He evidently pondered no more over such strange instances than other observers have done who have

received similar object lessons at the end of many months' unsuccessful warfare waged over cases of ringworm of the scalp in children.

The drastic and long-sustained treatments that have been meted out by specialists as "the only thing to be done," remind me very much of some methods of procuring abortion. If a criminal wish to correct an irregularity due to conception by means of drugs, he must practically poison his patient. Skin specialists have hitherto had to resort to methods that have almost destroyed the skin altogether before they have obtained the desired result; and even then, as often as not, something has influenced the general health at the same time and cured the case for them, though they have not known it. The Chinese heap coals of fire upon the abdomen of a person suffering from an obscure complaint, and they often get good results, which might, on the other hand, be obtained more readily by a few doses of some of our medicines.

As a proof of my contention that adults do not manifest the same provoking and inviting forms of fungus dyscrasia that children do, but require a more vigorous or deliberate planting of the fungus at the outset, in order that their dyscrasia may take up the cultivation, I will direct the reader's further attention to ringworm of the beard. I think that many of the common initiating receptivities of childhood are absent in men; but through shaving and directly inoculating, just sufficient suitable dyscrasia may be met to account for the comparatively few

cases of ringworm of the beard that are seen. We do not hear of *tinea barbæ* in men being transmitted to others as ringworm passes from one child to another; there is evidently not the same active and inviting dyscrasia, even though, later on, there may be a kind of dyscrasia, produced by general worry and the idea of the affection itself, that is very marked indeed.

One reads in Jameson's book that "*tinea barbæ* seldom occurs in those who do not shave, even if exposed to contact with children or adults affected with ringworm." Shaving, therefore, deliberately turns up the soil for the planting of the organism. But the same author gives an exception to this: he notes that the "disease in a severe form is sometimes communicated to man from cattle, and then may be present in those whose beards are uncut, in an aggravated form." There should be nothing surprising in this fact, however. Grooms handle horses to such an extent, while brushing and combing them, that fungus elements must be scattered all over their clothes and skin, and their nails are sure to catch up organisms in abundance.

This one important point I wish to draw attention to at this stage, therefore: the method of contraction of the affection *tinea barbæ* is in most instances quite different from that we associate with other human fungus growths; the local sign generally arises through "a foul shave." No doubt it is sometimes taken from animals which are suffering, and not always from other men; but even then the razor and soap

brush will very possibly act as the agents of transfer. Ringworm of the scalp is not usually acquired through any cutting of the skin, ringworm of the beard is ; the skin is cut and the fungus planted directly into its soil, whether this be very favourable or not. Now, I believe that when *tinea barbæ* follows such a planting, the soil is very favourable. But here is the real crux of my paragraph : I consider that a fungus, deeply and firmly planted, tends, to a certain extent, to make its own soil. I believe that the very worst dyscrasia—or the one most favourable to the fungus—is that which is begotten partly by the worry that the affection itself—the aggravating ringworm—brings upon the sufferer. Just as I present this theory as one of the reasons why ringworm of the beard is so obstinate to treat, so shall I give an interesting parallel when dealing with the treatment of ringworm of the head. Worry does not cause gonorrhœa, it is true, but there is nothing on earth that will prevent the cure of this disease so much as the painful appreciation of its presence in the person.

There must always be many cases of various diseases, illnesses, or affections where the absolutely finite cannot be determined ; yet we can come down to positions of very rational conjecture. We might never be able to say, when examining a case of *tinea barbæ*, whether a nasal catarrh existed first, or a megalosporon ; we could scarcely be expected to solve all problems like these without any difficulty ; neither could we be quite certain whether a very pronounced dyscrasia existed already in a particular

case for the reception of the fungus which took root, or whether the lightly implanted mould afterwards helped to create a still more favourable dyscrasia and soil. To the very end of such matters of course we might never be able to arrive, however much we might search and research, but it behoves us all to go as far as possible. It might be easy to blame one thing or another for giving ringworm of the beard to grooms; whenever they have a suitable dyscrasia they are specially liable to the affection. They work so intimately amongst horses, and often roughly finger their noses, and they constitute a class that shaves more persistently than any other, under circumstances that are rather likely to encourage any kind of contagious skin affection. Horsey men are generally of the clean persuasion in one sense, though eminently of the soiled in another: they must shave more than any other class, excepting priests and actors, and they very often have to conduct this operation in or near stables and other dirty out-houses. Therefore, *tinea barbæ* is the grooms' own, so to speak.

CHAPTER VI.

ALOPECIA AREATA.

THIS affection has caused an immense amount of controversy and theorising, and still authorities are halting and divided. Some observers cherish the opinion that it has some association with ringworm, while others hold to the trophic nerve theory. Some argue that it is communicable and others that it is not.

Now, the resemblance in some respects between this affection and ringworm must not confuse our final judgment, nor ought simple appearance be allowed to seriously mislead in any way, either generally or locally. We must not conclude that the condition depends upon a fungus because we find some micro-organisms, and we must not be certain that a trophic nerve disturbance is the foundation of it if our lens or microscope fail.

Bearing in mind certain theories of other writers, and taking into account the one I shall advance myself, I shall suppose for the nonce that I am taking a naked-eye view of half a dozen typical cases of both alopecia areata and ringworm for the first time, and I shall imagine I am listening to the short

histories of each in turn. I shall also understand for the moment that the etiology of ringworm itself, and its pathology, are practically settled and well known, but that alopecia areata presents many difficulties, causing great differences of opinion, and creating very serious doubts. Armed with such data, I should be incontinently impelled to the opinion that the latter affection is as much due to a fungus as is the former; and that the growth of the fungus is determined by a soil, which soil is the product of a dyscrasia. The few simple data as sketched would alone be sufficient to persuade me to this conclusion, if I were not in a position to ascertain more. I might even be told, while rapt in thought over the subject, that many things point to a neurotic causation; but *knowing what I do of ringworm* I should look to this as being more likely to provide strengthening evidence, and should not be altogether inclined to allow them to act as cross scents.

But on further proceeding to investigate alopecia areata, what do I find? I find every evidence of a fungus dyscrasia. I find the effects of local treatment ridiculous, and of general treatment magical—still further proof. Then I turn over some of the literature relating to the subject.

Jameson specially refers to the locality chosen by the earliest patches. He writes: "They are generally situated over the ridge formed by the insertion of the trapazius, on one side or other of the crown, and above or behind the ear. These are the most frequent situations of the first patches; others may

develop anywhere on the scalp. The bald spots are not symmetrical." In the first place one would never expect any *fungus* manifestation to show always symmetrical growth; and therefore the pure and simple tropho-neurotic theory alone receives a severe blow at once.

It has been observed that certain local signs of some other morbid affections or dyscrasias have a predilection for those parts which Jameson mentions as the sites chosen by the earliest patches of alopecia areata. Pediculi like the back of the head and ears; they find there the best soil or food on which to thrive and flourish; and they are themselves, unquestionably, signs of a dyscrasia. Impetigo also likes such places. It is true, however, that these two mentioned signs of a dyscrasia may be found on other parts of the head later on, when a suitable soil is there, and when they are furthermore provoked by contiguity or approximation. Notwithstanding, the fungus soil of certain particular dyscrasias is to be found largely at the back of the head, in the region of the occipital bone.

In all animals the same region is chosen by parasites. It seems to be an inviting region partly by reason of inaccessibility; it is a place that least lends itself to scratching, brushing or cleansing; it is a good harbour for unhealthiness, disease, and fungus growth. The top of the head and sides are the parts brushed most vigorously in ordinary habits; the back of the head, even by the most careful and scrupulous, is the place that is always least attended

to: how much more therefore is it neglected by the poor and dirty! Women and children suffer from alopecia areata more than the rest of humanity. This may be accounted for in a manner by the fact that they brush and cleanse the back of the neck less than do men and boys; though still another reason will be given further on.

Before going any further I should like to offer an explanation for the "singular thing" mentioned in Jameson's book on skin diseases, "that those situations which have been mentioned as the ones first affected by alopecia areata are the very ones on which ringworm of the scalp is rarest." The *adult* head has been subjected to years of brushing on the top and sides, and therefore alopecia areata will be likely to choose the occipital region that has been comparatively neglected. But children's scalps have not had the same treatment meted out to them for so long; very often those suffering from ringworm have had very little brushing and cleansing of the head at any time.

It would be interesting if observers of a very large number of cases could state whether the children of the better classes, who have had ringworm, have had spots more at the back of the head and less on the top than poorer ones. Though a child's head is never brushed as an adult's is, not even by a nurse or mother—it is too wobbly and unsteady and the brush hurts more—yet it is only reasonable to assume that the children of the better-to-do have their heads more brushed than those of the poorest.

Jameson refers to the observation of Michelson that sufferers from the complete form of alopecia areata show a family resemblance, and also to the remark of Tenneson that they show signs of an anæmia that is unexplained by any previous pathological or physiological condition. Is there not *here* a very strong suggestion of a fungus dyscrasia existing in these cases?

There is probably less local treatment—less varied and drastic—bestowed on alopecia areata than on any other hair or skin affection. This is doubtless due to the fact that it has not seemed to be so contagious a disease, and it does not appear altogether to be so loathsome and unclean as ringworm. Yet nearly all cases get well, showing that a dyscrasia is the real *fons et origo*—the necessary predisposing factor concerned with the mischief. The majority of cases occur in those having some obvious derangement of the general health, and when this derangement is corrected, or when it disappears apparently of itself, the alopecia simply vanishes, if it is not uncommonly extensive and if its duration has not been very long. Michelson observed entire restoration of the hair after sixteen years: this again points to a dyscrasia which ultimately disappeared and the alopecia with it. Nothing else could be capable of at one period sustaining and later on carrying away with it such manifestations.

The case is mentioned by Jameson of a woman who had total baldness of the head and eyebrows; she had had several children, and after the birth of

each "a fresh loss of the down, which had become tolerably plentiful, always took place." Here is another interesting example of a dyscrasia either remaining latent or sub-acute, and at times becoming exacerbated, or of a fresh one being produced each time by the trying and general health-disturbing function of child-birth.

There is plenty of evidence pointing to the fact that alopecia areata depends upon a fungus dyscrasia—one that is very closely allied to that of ringworm, but more prone to originate at a later age, and one that is associated with *certain mental states that are rarely present in the same form in those younger*.

When two cases occur in the same family, there will almost certainly be found neurotic tendencies there also. Dark-haired people are said to suffer more than fair. Are they not more hysterical, emotional, and more given to neuroses of various kinds? Whether the dyscrasia in these instances is also characterized by tropho-neurotic disturbances may not be clear, but it would not seem at all unlikely that this is the case when it is taken into account that the state of the *general* nervous system is so unhealthy. Yet such disturbances would, after all, only be likely to determine the position of a spot of alopecia areata fungus: and a serious consideration of them would be quite beside the much more important questions concerning the fungus dyscrasia and the fungus growth itself.

As regards the parasitic probabilities which present themselves, there is ample evidence to indicate that

organisms are present in abundance. Jameson notes that "though the presence of micro-organisms in the root-sheaths of the hairs round the affected areas has been proved, there is not a consensus of opinion as to the nature of these, while their casual connection with the loss of hair is extremely problematical. Dr. A. R. Robinson found micro-organisms in the lymph spaces of the corium and sub-papillary layer. These consisted of cocci in masses and rows. The deeper structures were also the seat of inflammatory changes, the hair follicles, according to his view, being affected secondarily. In one case, of only a week's duration, the micro-organisms were very abundant."

When one comes to consider how some of the best pathologists have formerly floundered over the micro-organisms of ringworm, there is not the least wonder that the pathology of alopecia areata is not very well understood. Referring to the etiology and pathology of the latter affection Aldersmith writes as follows: "The view held by most dermatologists for the last twenty years is, that it is a non-contagious tropho-neurotic affection, associated with an atrophied condition of the hair follicles and of the hairs, and often of the whole of the textures of the scalp. Its origin is supposed to be some peculiar functional nerve disturbance, causing impaired or defective nutrition of the hair follicles and of the hairs. Some observers believe that it is due to a fungus, like the fungus in *tinea tonsurans*, and that there is an intimate relation between the two diseases. The latest view is, that it

is caused by a definite micro-bacillus, the same as found in ordinary seborrhœa (Sabouraud); and that there is a close relationship between seborrhœa and alopecia areata."¹

All these testimonies point to a dyscrasia and a fungus. One might proceed indefinitely with contrasts and similarities, and bring up several different kinds of skin disease to offer their evidences in favour of this theory; but space will not permit. Other skin affections will be dealt with in a future work, and as valuable as a study of them might be on the present occasion, one must draw the line somewhere. I only desire to advance just sufficient evidence as is necessary to support my main contention and no more.

Jameson observes, however, for the benefit of those who hold the tropho-neurotic theory, and who explain the bald patches as being due to a failure of nutrition over certain areas of the skin, that this "gives little information as to the essence of the ailment." True; but there is another point on which I would ask attention. Is there not a failure of nutrition at the spots of ringworm as well? Most certainly there is. A fungus dyscrasia determines the site for these spots and the micro-organisms grow upon them. So I believe it is with alopecia areata, and still other skin affections: they have their dyscrasias and their micro-organic growths or fungi that are inclined to live on the particular soils of each.

It would seem that the want of clear evidence of

¹ "Ringworm," p. 274.

the presence of specific micro-organisms in alopecia areata, at the same time that there have been distinct indications of neurotic influences, has led former observers to believe in the "neurotic theory;" while, on the other hand, abundant signs of organisms and either confusing or absent neurotic indications have induced enthusiasts to believe that ringworm is a local malady, purely and simply.

Some authors seem inclined to urge the tropho-neurotic theory by holding up the general neurotic symptoms as their proof; and this may be only natural, after all. They think that the local manifestations are likely to be associated with some general nervous state; and no doubt they are, as I shall point out in the chapter on fungus dyscrasia. But I consider the same observers have made a mistake when they have stopped at this point and not given fungus a fair chance *as well*.

My former estimable teacher and shrewd observer, Jameson, has taken the following particular notice: "In some instances," he writes, "sudden mental shocks, in others more gradual though not less wearing influences, which vex, worry, or distress, have been followed immediately or after a short interval by the appearance of alopecia areata. Of course," he continues, "such cannot be traced in all or even in many cases, for alopecia occurs frequently in children, on whom such impressions tell lightly." Now, I have never seen a case of pure alopecia areata in which some such influences could not be traced.

It is true that histories are often very difficult to obtain ; but one should never be led to believe that signs and symptoms are not present in any particular case because they are not quite obvious. One gets used to cases of all kinds in general practice in which one can elicit no history at all valuable, and now and again one encounters instances in which patients deliberately and intentionally deceive and give entirely false accounts, for some reason or other best known to themselves. Occasionally one can detect the most flagrant perversion in the midst of neurotic peculiarities. I have had patients in my experience suffering from gonorrhœa, who have come complaining of a pain in the chest.

In hospital practice it is still more difficult to get correct histories, and, considering that most experts have obtained much of their experience amongst hospital patients, there is no wonder that they have been often misled into hasty generalisations on certain diseases or affections. A patient once explained in a crowded theatre that the chancre which a professor of surgery pointed out to the students present, had been caused through his running against a nail that stuck out of the wall. All present smiled. Now, in this place, nothing further could have been elicited from such a man concerning his trouble, but in a private consulting room the truth could have been drawn from him—in spite of any false initial asseveration—without any difficulty whatever, with a little tact.

As regards Jameson's statement that alopecia

areata frequently occurs in children on whom neurotic and emotional impressions tell lightly, I have two observations to make. The first is, that bald patches noted in children have often been entirely misjudged, as the writings of more than one authority serve to show ; such signs have been, in many instances, the result of some drastic treatment for ringworm, and have had no particle of true alopecia areata about them. I do not lay down that alopecia areata proper cannot be found in children, however, far from it. Secondly, I would ask this question : how have observers judged, as Jameson did, that certain children have only been impressed lightly by shocks, worry, or anxiety, understanding that such things have often great and manifest effects on adults ? The further results of such mental disturbances may be very great in any one, and I have no doubt whatever that they are great even in the case of children ; but the *appearance* of the results may be very different —hence mistakes. I shall adduce evidence further on to show how likely it is that mental disturbances—acute or chronic, rapid or slow in action—either constitute part of, or are actually instrumental in forming, those dyscrasias which favour the growth of fungi, whether belonging to ringworm or alopecia areata, in young as well as old subjects.

Those authorities who have believed that there are two varieties of alopecia areata, the contagious and neurotic, have perhaps come nearer than others to the point of solving the mystery ; but I am of opinion that they would have got nearer still if they

had expressed the belief that generally the two varieties exist together.

To refer to the question of communicability, about which there is some difference of opinion, it would appear that alopecia areata is contagious in the same manner that ringworm is, but nothing like to the same extent; not that any fungus belonging to it is less communicable in itself, but because the soil is less common and less instantly and sustainedly receptive than a fungus soil is amongst children liable to ringworm.

Abundance of soil, in a good many subjects, produced under the same conditions, would be more likely to account for certain classical outbreaks of alopecia areata which authors, who have faith in the parasitic theory only, make a point of mentioning by way of illustration, than the mere presence of micro-organisms. The latter have constituted the seed—passed from one patient to the other—I would not doubt; but the soil determined its growth in all the cases, depend upon it.

Perhaps one ought to exercise a little patience over the idea existing in some minds that alopecia areata proper and tinea tonsurans have some subtle connection; there might *possibly* be a coincidence of the two occurring together, just as it is possible for other diseases to be present at the same time in the same subject. But it is utterly gratuitous and rash for anyone to suppose that there is consequently some distinct relationship between them; they both have their own predisposing dyscrasias, and also

organisms, any of which may have some sort of resemblance, but that is all. Hutchinson is very possibly right, however, when he thinks that "alopecia areata is very commonly a sequela of ringworm, occurring either many years or only a short time after," for slightly different dyscrasias, each having originated as a result of the same general neurotic disorders, will not unlikely appear in the same subject, though at different periods of existence, and therefore favouring different fungi.

It would serve no good purpose to criticise at all fully the various arguments advanced by several authors respecting the non-parasitic or parasitic nature of alopecia areata; great differences of opinion have existed now for many years, and still exist. As so much depends on accuracy of diagnosis, and as we have seen that bald patches resulting from the treatment of ringworm—or due to a slightly changing dyscrasia, while the fungus itself has been heroically and successfully treated—have been so often confounded with alopecia areata proper, the less space devoted to this particular question of parasites the better. One has no opportunity of procuring the exact data from which former conclusions have been arrived at, and therefore silence is at least respectful. As Bristowe was disposed to believe that the celebrated cases of alopecia areata which occurred at Hanwell, and which have been referred to as classical instances by so many authors, "were probably examples of ringworm," we need scarcely make serious trouble over the hard and fast theories

such illustrations have been put forward to strengthen. One can arrive at nothing satisfactory by means of uncertain or incorrect data.

To give some idea, however, of the hopeless confusion which exists regarding the nature of alopecia areata, I could not do better than quote once more from the works of well-known authors. Abraham, writing on this subject in 1893, remarked : "The former theory [the parasitic] has had its chief votaries in France, the latter [neuropathic], in Germany ; but we find, even in these countries, that accurate observers have from time to time objected to the prevalent view, and have stated their opinion that some of the cases are probably of neurotic, and others of parasitic origin. For instance, in France, such men as Leloir, Brocq, and others admit a tropho-neurotic group of cases ; and in Germany, Lassar, Unna, Eichhoff, and others now allow that many cases of alopecia areata are parasitic. In America, and in this country, medical opinion is much divided ; but here, as elsewhere, the dual theory appears to be rapidly gaining ground."

Besnier also relates some cases of supposed contagion ; and Bowen reports an outbreak in an orphan asylum in the U.S.A. Other observers have reported cases of outbreak of alopecia, especially in France.

Radcliffe Crocker is the chief exponent in England of the view that alopecia areata is contagious ; and in his work, he has given very fully his reasons for considering this disease to be parasitic, and one intimately related to ordinary tinea tonsurans in etiology.

Crocker says: "It [alopecia areata] might with propriety, in my opinion, be called alopecia parasitica, or the old name tinea decalvans might be revived. It forms at least 95 per cent. of all cases of alopecia. In a large number of cases, it can be shown that contagion is the probable cause." He refers to some, and especially mentions Hillier's report and remarks: Hillier found "in the root-sheaths of two or three hairs a number of spores of a fungus, having all the appearance presented by the fungus of tinea tonsurans, and many atrophied hairs." Crocker then refers to some of his own cases, and remarks, concerning the hairs found round a patch of alopecia: "One pulled out of the border showed distinct fungus elements, indistinguishable from those of tinea tonsurans."

Aldersmith further writes: "The important question at issue is this: Is a case such as that described by Crocker (where 'distinct fungus elements, indistinguishable from those of tinea tonsurans,' were found) one of true alopecia areata? I say most decidedly *it is not*; but it must have been one of tinea tonsurans, with alopecia coming on, or a case of 'bald ring-worm.' Instead of the majority of smooth bare places on the head being distinctly of a parasitic nature or 'bald ringworm,' I maintain that such cases are rare, and that by far the greater number of bald patches (true alopecia areata) are not in any way due to the fungus of ringworm, and are not contagious. My own opinion is," Aldersmith continues, "that much confusion has been

caused by the united cases of alopecia and ringworm, many cases of which have been reported. There is also a form of tinea called 'bald tinea tonsurans' by Liveing, who says, 'Tinea tonsurans occasionally produces perfectly smooth, bald shining patches of the skin, bearing a very close resemblance to alopecia areata, for which they may easily be mistaken. It is the occasional development of these temporary, smooth bald patches in common ringworm which has given rise to the erroneous belief that there is a parasitic disease called tinea decalvans, distinct on the one hand from tinea tonsurans, and on the other from alopecia areata: no such disease really exists.'

Fox and Blaxall also remark: "Possibly some of those mysterious epidemics of supposed alopecia areata associated with ringworm fungus may be of this nature" (referring to the peladoid form of the megalosporon endothrix, fragile variety): "Everyone knows a variety of alopecia areata in which clavate stumps exist, on the margins of the patches, whilst the surface is frequently riddled with black dots, corresponding with the follicles. We have given these cases special attention, and made an exhaustive examination of the plugs, but have never been able to find or cultivate any ringworm fungus."

The above differences of opinion could only have been brought about by imperfect observation and incorrect diagnosis; it is impossible to come to any other conclusion, as much as one would wish to praise everyone alike all around.

Aldersmith himself still further discusses in his book the question whether alopecia is in any way due to a vegetable parasite; and he refers to a case which exhibited both this disease and ringworm at the same time. I have already noted the possibility of such a case occurring, and I have sympathy and admiration for Aldersmith's judgment—until I arrive at a "remarkable" case he cites, when I have second thoughts.

"A child was brought to me," he writes, "with several patches of genuine alopecia areata, which had recently been cured, and the new hair was growing freely on all the places. She was not sent to me for this trouble, but for ringworm; for this child had recently been infected with genuine tinea tonsurans from her sister, who had taken the complaint from an outside source. There were four distinct places of tinea tonsurans on this child's head; and, what was very peculiar, there was one patch of ringworm, with the usual characters and the hairs breaking off short, in the centre of an old patch of alopecia areata, which at that time was quite well, with the hair growing on it. It was not new, fine, downy hair, which is very rarely involved by the fungus of ringworm, but hair about half an inch long."

Now how could such an ardent observer diagnose "several patches of genuine alopecia areata, which had recently been cured, and the new hair was growing freely on all the places?" Considering that this affection presents quite enough difficulty to most observers, in its typical and untreated state, how can

a cured case be so well and certainly recognized from cured ringworm?

Then further he notes: "She was not sent to me for this trouble, but for ringworm; for this child had been recently infected with genuine tinea tonsurans from her sister." There was nothing whatever, according to his own description, that pointed to alopecia areata in the case he gives, excepting *a cured case with hair growing*; but there was everything to convince him of the presence of ringworm, if there was anything to be seen at all, taking into account the history he obtained.

After studying the above case fairly and unbiassedly one is surprised to read the next paragraph in the same book. It runs as follows: "I have also caused a condition exactly resembling true alopecia areata to come on, during the treatment of tinea tonsurans. There is no doubt that patches of small-spore and of large-spore ringworm may pass into bare, smooth, shining places, which are practically not to be distinguished from true alopecia areata. I have seen many cases of this 'artificial' alopecia areata developing on the patches of tinea tonsurans, caused by the 'boric-acid spirit, and ether' treatment, and also by the 'gas-water' treatment. They were at last just like ordinary cases of alopecia areata." And then he gives two examples. Now I ask the question: Was not the particular case he mentions as having exhibited "genuine alopecia areata" and ringworm at the same time, exactly similar to those he refers to as having shown "a condition exactly resembling true

alopecia arcata" while they also had tinea tonsurans as well?

Crocker has referred to eight children in one family, and their governess and her sister, as having contracted what was said to have been alopecia. But on examination "fungus elements, indistinguishable from tinea tonsurans were found." After such an instance one would be quite justified in betraying a certain amount of scepticism regarding the Hanwell outbreak before mentioned. Where diagnosis fails, who shall settle questions of etiology and contagiousness?

Aldersmith has observed that "the clinical characters and termination of alopecia do not at all resemble those of parasitic origin. It is liable to recur, even after some years." Why should not a parasitic affection recur after some years, even if it is not a sign of a dyscrasia? I am of opinion, however, that alopecia areata, being one of the signs of a dyscrasia, which dyscrasia itself is liable to be induced partly by mental or neurotic influences, is eminently an example of a parasitic affection prone to recur: one may reasonably suppose that the same individual will be more or less subject to recurrent disorders of the mind, or nerves, or general health, as the case may be. What are more recurrent than nervous troubles? Neuroses of various kinds are more recurrent than any large set of disorders we are acquainted with.

I must also traverse the theory that patches may follow the track of a nerve, "and very often are

symmetrical, like ordinary baldness, which would not be the case if a fungus, like a fungus of ringworm, were the cause." In the first place, I should not choose to admit that a fungus is the cause of any local sign we may happen to observe. I hold that a dyscrasia is the cause of such signs of fungus growth as ringworm, alopecia, and some other skin affections. Then there is nothing remarkable in the fact that patches of fungus growth sometimes follow the track of a nerve; why should they not? Particular nerves can be affected even after a general shock to the system, and some of the nerves of the head are undoubtedly selected in alopecia areata dyscrasia. Moreover, we know that certain toxic states of the system pick out particular nerves on which they may exercise their influence, and characteristic paralyses are the result.

As to the symmetry of patches, I have only to remark that since alopecia areata has been hitherto so confounded with other conditions, I must decline to accept instances of symmetry that have been referred to by some authorities. But if they were absolutely genuine and correct, being quite accurately observed and diagnosed, they would by no means present a very strong argument against the dyscrasia and fungus nature of the affection. An integumentary nerve can quite well be affected equally on both sides, and so induce a symmetrical fungus growth, and we must remember that the dyscrasia of alopecia areata would seem to be far more neurotic in origin and character, as everyone must allow, than the

dyscrasia of ringworm. Nerves can determine sites, it is true, but dyscrasias and fungi can also produce signs on those sites.

I may interpolate at this stage my strong suspicion that the condition known as leucoderma or vitiligo is a sign of a dyscrasia that bears some resemblance to fungus dyscrasia, but which either does not favour the growth of any fungus at all, or merely bears one that is nothing like as obvious as ringworm, alopecia, etc. It seems to be a dyscrasia that picks out suitable areas—may be tropho-neurotic spots—but which either does not produce exactly the right kind of soil or does not become sown with the ordinary fungi.

I deem it quite superfluous and unnecessary for Aldersmith to point out in his book that neither he nor Sir Dyce Duckworth have ever seen true alopecia areata when there was any positive evidence that the disease was caused by contagion from some other person, for, looking upon alopecia as being only a symptom of a dyscrasia which has had chiefly a nervous origin, I simply do not consider that neurotic conditions are communicable. I can conceive it quite possible, however, for two or more members of the same neurotic family to have alopecia areata at the same time, caused by some mental or nervous depression, which might *appear* to have been communicated. I do not seek to explain the Hanwell cases, nor the eight of Crocker, in this way, notwithstanding, for I do not believe they ever were true cases of alopecia areata.

That alopecia areata has some specific micro-organism belonging to it has long been supposed;

and many different organisms have been found. Thin and others have been successful in their search. Now, I am of opinion again that we can be too anxious to find a specific micro-organism. Yet, on second thoughts, excess of zeal always does *some* good ; it is only by means of excesses that we learn moderation ; it is surely by the guidance of extremes that we are able to mark out the means. Let us therefore find a specific micro-organism for alopecia areata if we can, by all means ; but we must not draw hasty and rash conclusions if we cannot. We may be able to find one, some day ; but, meanwhile, it behoves us to give our attention to other more important aspects of the affection.

Sabouraud has recently done some good work. He has pointed out valuable microscopical evidences concerning alopecia, and he has made a clever comparison with seborrhœa. Perhaps we could not do better than give a little attention to these at this stage of our consideration.

This acute observer found in his researches numerous common bacteria, and above all, he discovered "the micro-bacillus of alopecia areata." Not ceasing there, he considered this bacillus to be "indistinguishable from the bacillus occurring in seborrhœa olcosa, and in aene." So far, this seems certainly good. But then he went on to say : "I have been able to state that the micro-bacillus of seborrhœa, unique in kind, and innumerable in amount in the lesion, is the constant microbic feature of this affection, without, nevertheless, being able to prove

that it is its cause, since I have not been able to reproduce with it at will the type of the disease in which it is met." Quite so, I must take these observations of an observer for whom I have the highest esteem as providing valuable material for a cursory examination into methods of working, lines of reasoning, and conclusions that are drawn.

That Sabouraud found numerous common bacteria is not in the least surprising. Where are they not found, when there is any suggestion of unhealthiness, dirt, or impaired general health? But he also found in large numbers what he named "the micro-bacillus of alopecia areata, a bacillus indistinguishable from one occurring in seborrhœa and acne." Now, what does such a yield of bacilli show in these afflictions? Very, very little, in my estimation, *excepting that a dyscrasia was present.*

Having discovered particular bacteria or bacilli in association with certain diseases, a good many scientists and their faithful followers seem to have become possessed with the idea that pure-bred and unmixed colonies must of necessity be found belonging to these diseases and to no others. But it is one thing to find a bacillus, and quite another to show that a disease is dependent on it. The study of bacteriology is only in its infancy, and we may yet learn in the future how our former acute vision, which enabled us to see *something*, has often misled us into the proud belief that certain bacilli, that were caught and cultivated, nailed to the laboratory counter, named, and written about, were the initiation, con-

tinuation, or termination of this or that disease. We may get some further surprises in the future when we learn a finer distinction between *propter hoc* and *eodem tempore*, between baeilli that cause, and baeilli that happen to be there, in our study of various diseases.

It is therefore when I come to the later portions of my quotations from the works of Sabouraud that I feel I have a higher opinion of his conclusions—when he admits that the innumerable micro-baeilli of seborrhœa, though the constant microbic feature of this affection, may not be its cause, since he has not been able to reproduce the disease by their means, under what he deemed satisfactory circumstances.

I can give other reasons for believing that these bacilli are not the cause of seborrhœa, and not the cause of alopecia areata either. We must not forget that very many different micro-organisms have been found in association with several different diseases, which have had nothing to do with them beyond this: they have simply been present, as concomitants to general unhealthiness, or as parasites to other subordinate or secondary soils. And moreover, why should we suspect with suchunning the fungus character of the alopecia areata, appearing as it does in circular patches, so similar to, and alas! even sometimes confounded with, ringworm, and yet find nothing of the kind with seborrhœa? I firmly believe that seborrhœa also is a sign of a dyscrasia, just as I have considered leucoderma is, but I should

refuse to recognise that certain bacilli found in both alopecia areata and seborrhœa settle the point that these affections have a distinct relationship one with the other. Each has a dyscrasia, which *may* be exactly of the same kind; *certainly* they are somewhat similar. If they are exactly of the same kind then the micro-organisms will very likely be different, if they are not of the same kind then the micro-organisms may possibly be the same.

Not only do I consider that Sabouraud would have little chance of producing either of the above affections by means of what he named the bacillus of alopecia areata; but I do not believe he would have the slightest chance with any micro-organism he could find associated with these affections, *unless* he planted them again in the soil of a suitable dyscrasia.

I think that Sabouraud's conclusion that seborrhœa and alopecia areata are "essentially identical" is a very hasty one, if not dangerously enthusiastic, when only founded on the fact that certain bacilli are present in both.

It is desirable that references to affections not more immediately concerned with those already alluded to should be as few and short as possible, or a great deal could be made of the subject of ordinary baldness of the head. I am endeavouring to avoid dealing with this subject, but I cannot pass on very well without drawing attention to my firm conviction that all instances of falling hair are due to dyscrasias, that range, in kind and degree, from

the one produced by syphilis to that occasioned by senility pure and simple. And there is another point I would advance. It would seem that nearly all skin diseases and affections—if not quite all—are primarily the product of dyscrasias. Let the exciting causes be what they may—of a fungus, bacillary, or any bacterial nature—and even suppose them to be purely and simply traumatic or irritative, there must be a dyscrasia that provides its peculiar soil for each—though, of course, the same sort of soil will probably be suitable for more than one kind of micro-organism. A pin prick on the finger is not a cause of death, *unless* a person have a suitable dyscrasia to favour ultimate “blood poisoning.”

While reviewing the various instances of hair falling off, one sees so much evidence of the influence of dyscrasias of various kinds, that any very diligent search after micro-organisms at the sites of mere local signs would seem almost waste of time, comparatively. And we also have such interesting conditions of the hair itself, which I shall deal with in a later chapter, in connection with, or as symptoms of, certain diseases and disorders, as help very much in the study of the whole subject. The microscope and lens may indeed be safely left idle for a time.

The subject of ordinary baldness is decidedly interesting from several points of view. It has earned special attention recently through the pronouncements of Sabouraud. On making myself acquainted with the gist of this authority’s conclusions, one thing is at once apparent, and it seems

to demand comment : the boldness, and almost *abandon*, with which this observer classes seborrhœa oleosa, alopecia areata, and ordinary baldness, as one lot to be knocked down and disposed of as quite belonging to one another—there being “no doubt about it”—just because of the presence of a micro-bacillus—found at any rate in the first two of the affections named—and also because four characteristics are common to these.¹

Let me quote for a moment what Sabouraud holds: “Seborrhœa oleosa and alopecia areata are essentially identical processes. The patch of alopecia is nothing else than an attack of acute circinate seborrhœa; and, conversely, bald persons would not have become bald but for a diffuse attack of chronic alopecia areata. I readily appreciate that this statement will seem quite subversive of accepted ideas, and even monstrous by dermatologists, and I imagine it will be received with incredulity.”

A further insight into the views of Sabouraud may be gleaned from the following conclusions taken from Aldersmith’s work on ringworm:

“1. The specific micro-bacillus of seborrhœa oleosa, when it gains access to one of the pilo-sebaceous follicles, produces within it four constant results:—

- (a) Hypersecretion of sebum;
- (b) Hypertrophy of the sebaceous gland;
- (c) Progressive atrophy of the papilla;
- (d) Death of the hair.

¹ “Practitioner,” May, 1897.

These phenomena result from seborrhœic infection either of the so-called smooth parts of the skin or of the hairy areas.

“2. In the hairy scalp, this infection chooses as its favourite site the vertex, and the depilatory effect of the seborrhœa produces the baldness. Ordinary baldness is, therefore, nothing else than seborrhœa oleosa of the vertex, which has assumed a chronic form. Seborrhœic affection is not only indispensable to the production of baldness, but this infection continues as an intense, pure, and permanent condition even when baldness is clearly and definitely established.

“3. Ordinary baldness is, therefore, a perfectly well-characterized disease due to a specific micro-organism.”

Another account of Sabouraud's views on the etiology of alopecia is given by Wickham, who says: “Sabouraud came to the conclusion, that, if the loss of hair in this disease is due to microbial intoxication, the toxins of the micro-organisms would be capable of inducing alopecia.” Sabouraud noticed that alopecia always started from a central point, and spread as oil runs in a fabric; that “the local development indicates that the micro-organism resides in the active peripheral zone, and more exactly in the dilated orifices of the hair follicles. He was enabled to isolate this special bacillus, and by injections to cause bald places in rabbits; he then noticed the bacillus to be the same as the one found in the comedones of acne (Hodara's) and also the

same as the bacilli found in every form of seborrhœa; so that he came to the conclusion that the bacillus of the seborrhœic cocoon and the acne bacillus are identical. This made him at first doubt if this microbe were also the cause of alopecia; but further researches led him to the conclusion that this special bacillus was the cause of both seborrhœa and alopecia, or, as it is written, "that consequently seborrhœa and alopecia areata have a common origin from the same micro-organism."

What the certain characteristics are that are common to seborrhœa, alopecia areata, and common baldness, one would not doubt for a moment: those quoted above under (a), (b), (c), (d), may quite well be accepted; but to jump to a hasty conclusion that an observer only requires such points in order to be certain of *everything* argues over-enthusiasm, and a great probability that misconception will arise. There are *clinical* characters that must not be overlooked. A certain dyscrasia is behind seborrhœa—as it certainly is behind alopecia areata—which produces a soil favourable to the growth of particular micro-organisms, which micro-organisms help to determine the falling off of the hair. There is every reason to believe that the essential micro-organisms of alopecia areata are of a fungus order, as are those of ringworm, but not of the same species; and it is extremely probable that in addition to the bacilli of Sabouraud there is a fungus associated with seborrhœa, growing on a soil that is produced by a certain dyscrasia, evidence of the existence of which dyscrasia I shall presently adduce.

I should not be at all inclined to question Sabouraud's view that ordinary baldness is nothing else but chronic seborrhœa of the vertex: I think it very likely that this is the case, *taking seborrhœa to mean what it is commonly understood to mean*. But our points of view are different, our premisses unlike, and the positions of starting not at all the same. I find it necessary to begin with a dyscrasia: Sabouraud begins with seborrhœa and a bacillus that happens to be with it. I am of opinion that seborrhœa is a certain sign of the presence of a dyscrasia in the subject. I have rarely seen cases of this affection which have not also displayed other quite obvious signs and symptoms of the general health being below par in some way, abundant indications of trouble, mental shock, and various neuroses being constantly present.

As to Sabouraud's inoculations, I could not do other than politely refuse to accept their teachings unless the data, the circumstances of cultivation, and the number of cases, were very precise and more reliable. On reading Wickham's account of Sabouraud's experiments, which included the inoculation of a rabbit, that "at once commenced to shed its fur, and within forty days from the date of inoculation general alopecia was established," Aldersmith thought that "perhaps cultures from ordinary microbes of the skin might also cause loss of hair;" and Lockwood gave his opinion that "the pathogenic properties of the microbes of the skin seem to be considerable. When cultures which had been inocu-

lated with the contents of the sebaceous glands were introduced into the subcutaneous tissue of mice, they killed the animals in three or four days, causing œdema, suppuration, and ulceration, *with loss of hair.*"

These two observers last named have taken the right scent, undoubtedly, in spite of Sabouraud's cross-luring. When scientists inoculate, who shall classify conclusions? Who shall distinctly limn cause and effect? Who shall argue that I should be wrong were I to aver now that the loss of hair in all the rat cases given above was in each instance due to fright, and a compound dyscrasia that was the result of confinement and usage? I do not opine deliberately that the rats did die of these things, because I have no particular desire to do so; but suppose I did, I think I should have a chance of scoring a point as against Sabouraud and his eminently questionable expositions of cause and effect.

I have observed that Aldersmith has no faith in the conclusion of Sabouraud, that one micro-organism is the cause of two very different affections. He thus writes: "The weak point of the argument (Sabouraud's) in my opinion is that the same micro-organism is to be found in common seborrhœa and in ordinary baldness, as well as in the comedones of acne. If alopecia areata were solely due to such a common microbe, it would surely be much more common than it is, especially as so many people have seborrhœa. Lately, in examining some boys for admission into Christ's Hospital, I noticed that almost half had

distinct scales of seborrhœa, but there were no cases of alopecia areata."

The same organism may certainly be *found* in the two affections ; but mere presence alone does not prove everything. So many kinds of organisms find suitable soils in various degrees and conditions of ill-health that it is not surprising if similar ones should be found in different environments ; but simple similarity or identical nature should not fix conclusion as to causation, without any consideration for other data being given. We should not say that bats and birds had the same origin just because they possessed wings ; and we could by no means be certain that two leaves which seemed alike belong to the same tree ; neither should we lay it down as a fact that a certain man was an incendiary because he happened to be on the premises when a fire broke out.

I will sum up my views on the etiology and pathology of ringworm, seborrhœa and alopecia areata in the following words : I consider that these affections are local signs of dyscrasias, the nature of which is to be discussed in a later chapter. The micro-organisms essential to the local signs of each are hyphomycetes, but there may be found certain bacilli and other organisms also infesting the seats of election. The hyphomycetes are communicable, in the sense that if they are planted on a *suitable soil* they will grow ; but the dyscrasias are not communicable. It is possible for two or more people to suffer from the same kind of dyscrasia—who have lived or associated with one another sufficiently intimately to

excite suspicion that local signs have made their appearance through contagion—when the same set of circumstances has influenced each one, whether we consider the circumstances to be methods of living, habits, or transmissions of heredity.

CHAPTER VII.

FAVUS.

THIS is an interesting disease, and one worth studying side by side with ringworm and other scalp affections, because the pathology and etiology seem comparatively clear, and because, as a fungus disease, it helps us to appreciate the influence that a dyscrasia has, and it begs us to pay limited regard to micro-organisms—though perhaps we have a right to know something about the latter.

There are a few facts about favus which it will pay the reader to note particularly. The affection is much rarer than it was formerly; it is much commoner in Scotland than in England; those affected frequently manifest signs of general ill-health. These and other points all have their real significance.

The disease is commonest at the age ringworm likes best; and taking into account the predilection for this age which impetigo also shows, one might refer to the period between seven or twelve years as the fungus age. I shall have some further observations to make regarding age and the growth of human fungi in a later chapter on fungus dyscrasias. It will be sufficient at this stage to point out that when

exceptions regarding age do occur, there is some very distinct reason for them. Jameson refers to a case of M. Lailler, in which "a man of forty, who had had a favus when a child, but had been free from it for twenty-five years, experienced a return of the complaint owing apparently to the exhaustion and hardship consequent on the siege of Paris, without exposure to any fresh source of infection." Now, the patient in this case had again developed a dyscrasia, one which had also possessed him when young, on account of the exhaustion and hardship of his method of living. Perhaps an adult can more readily develop such a dyscrasia when he has had a similar one as a child, this we can conceive to be very possible; it might not be of *exactly* the same kind, however, but sufficiently similar to produce a favourable soil for favus to grow upon.

The fact that Lailler's patient had not been exposed to any fresh source of infection is very important. Does it suggest that the fungus remained latent in the skin? Or will it persuade us that the dyscrasia is the one thing needful for this disease, and that fungi are always plentiful and varied anywhere if soils can only be found suitable? I am inclined to favour the latter. I also think it possible that a tendency to develop an exactly suitable dyscrasia—suitable for favus—might remain for twenty-five years under very rare circumstances, though I would consider that some very strong influences would have to be at work in order to reproduce it—stronger in the case of an adult than in the case of a child even.

Most observers have found the disease more prevalent in Scotland than in England, and Jameson has noticed that Polish Jews and Russians contribute a large proportion of cases. It is fairly clear that bad food and a generally unhealthy state of living are two of the fundamental essentials for the development of the dyscrasia. I myself have been witness to instances of squalor and destitution in towns of the Northern country that have been worse than anything to be found in London and other English towns ; but I should not like to make the definite assertion that the lower classes generally in Scotland are dirtier or more favourable to fungus than the English, in their mode of living. Viewing all sides of the question of causation, I am inclined to think that food has a great deal to do with the creation of the dyscrasia favouring this affection.

For instance, I can conceive it possible for dirt, vitiated atmosphere, and oatmeal porridge to produce favus in Scotland, while the same external influences, *with a different food*, would not be enough to cause it in England. London street arabs may get very little porridge, but various bits of other things to sustain them instead ; they may get just those scraps of bread, dripping, and what not, that may save them from favus.

Then there is the question of fish. My own particular observations have not extended far enough, unfortunately, but I have a shrewd idea that dried, cured, salted, and preserved fish, so much eaten in Scotland, accounts for an amount of scorbutic ten-

dency and purpura not to be found further South. Perhaps, therefore, fish, and not oatmeal porridge is the determining factor. Not hearing of similar affections amongst the lower classes in Ireland, to the same extent, at least, I am inclined to accuse either fish or porridge of being a powerful determining cause of dyscrasias producing purpura, scurvy, and favus. Arguing merely from the fact that favus is rarer than it was, I think we should be entirely wrong if we considered that it was simply dying out of itself, or that the seed fungus was scarce. The truth is that the dyscrasias and their soils are rarer, circumstances and influences which produce them not being so prevalent. Improved hygienic modes of living have administered their salutary effects.

The general health is out of order before favus sets in; but I have little doubt that the disease, when established, itself also exercises an indirect influence on the system for the worse. I refer to *indirect* influence advisedly, for all similar complaints necessitate such alterations in habits, such confinements and concealments from the sight of others, as cause worry and depression in the patient. Jameson says: "The disease itself is thought by some to exert a deleterious effect on the health of those suffering from it, from absorption of the matters produced by the fungus growth." But I am of opinion that the state of ill-health constituting the dyscrasia necessary for the production of soil appropriate to favus, is lowered more by indirect influence than by

direct absorption. Yet these are fine points which might never be settled accurately, and they moreover diminish in significance according as wider and more comprehensive knowledge concerning clinical signs and therapeutic effects are made manifest.

In studying favus by the side of ringworm, alopecia areata, and impetigo, let us carefully note the fact that it also is subject to "spontaneous cure."

Favus is only a sign; hence its clearing up when the dyscrasia it belongs to disappears. Making this statement as I do, I have no right to refer to any cure of favus as being spontaneous, however, for a cure never is really spontaneous, it results from a clearing up of the dyscrasia, which effect may not have been brought about by anything else excepting a healthier mode of life, and this might be adopted by chance.

The Achorion Schönleinii is understood by some to be the fungus causing the characteristic sign known as favus; but Quincke "has come to the conclusion that the morbid appearances can be produced by at least three different fungi.(!)" Unna, too, has brought forward evidence to prove that there are several varieties of the achorion." I do not doubt this "plurality" or "multiplicity of fungi"; and I have no wish to contest the opinions given whatever, as it matters so very little once one knows a rapid and effectual treatment, having beforehand recognized that whether the fungus be made up of one or a dozen different kinds it must have a dyscrasia—which itself should be treated, and not its symptom alone.

CHAPTER VIII.

IMPETIGO.

THIS is an affection that makes its appearance either on the face, scalp, or arms; some observers describe it as occurring also on the legs and other parts of the body in rarer instances. Just as in the case of ringworm and alopecia, there is much difference of opinion as to what should be called impetigo. Crusty and impetiginous looking places can complicate ringworm, and it is certainly very difficult at times to say how much there is of one or the other. But we should look upon all these conditions as mere signs, and endeavour to fathom the peculiarities of those dyscrasias which they belong to.

We shall see later on that the latter do not differ to any very great extent, at least very much the same kind of treatment seems to suit them all, admirably. The micro-organisms locally may be multiple —no doubt are—and the state of parts may be variable: we may have a soil that favours the preponderance of either one kind of fungus or another, while micrococci and bacilli may be there also, and conse-

quently we may observe signs which differ to an appreciable degree; but we must always have present a dyscrasia that is begotten of a set of influences which include dirt, impure air, bad food, certain forms of mental depression, and such like.

And it is not hard to appreciate the fact that certain varieties of impetigo are contagious, when we realise what masses of varied fungi and micro-organisms these unhealthy spots are. Given a suitable soil—and we should have little difficulty in finding it in more than one child of a board school—it ought not to be astonishing if a portion of the collection of mixed organisms which a crust of impetigo contains, having found its way from one subject to another, takes root.

The contagious qualities of impetigo seem therefore to depend largely upon soil, but a scratch or breach of surface may be necessary also, for auto-infection often seems to arise through the latter contingency and not through mere contact alone. Children having impetigo generally possess pediculi also, and therefore their finger nails are constantly turning over the soil of the scalp and setting the seeds of disease in other places. And if the nose of a patient, or ears, be sore also, there will be more places for the fingers to pick and plant. Moreover, the dyscrasia precipitating impetigo is apt to produce various other signs and symptoms, which include discharging ears and noses, and scratching may consequently be resorted to frequently.

The contagiousness of impetigo contagiosa should

not be solely put down to the power of its micro-organisms therefore; a good deal may be due to the coincidence of suitable soil being present in another. One child of an unhealthy, dirty, and ill-fed family will be very likely to have a fungus dyscrasia as well as another, when all live alike, and consequently each may have a soil suitable for the same kind of fungus, whether this happen to be ringworm or impetigo. I admit that a particular organism will create definite and distinct signs or symptoms under certain circumstances; but I insist that suitability of soil is the more important factor. In other words, I refuse to believe that *impetigo contagiosa* can be planted on an absolutely healthy head.

Impetigo is found amongst children in the same family often, and it does not tend to spread in schools or institutions, as ringworm does for instance. Yet most observers state that the contagiousness of it is manifested by its being transmitted through contact during play or by means of head coverings. Now, the tendency to spread to others shown by ringworm, and the comparatively limited inclination to propagation seen in impetigo, leads me to the conclusion, not so much that a difference of fungi accounts for it as a difference in dyscrasia. The dyscrasia favourable to the growth of ringworm fungus seems to be more easily produced and more commonly found amongst collections of better-cared-for children than that inviting impetigo.

Impetigo is an affection almost peculiar to children, especially those of the lower classes, who are fed and

housed badly. Jameson says it is found in such children, "most likely because in those it spreads most readily by contagion." It is quite true that contagious disease pure and simple will have a greater fling amongst this class than it will have in the midst of cleaner-living people; but here again I must insist that the dyscrasia determines the communicability, for we may see two or three children suffering from impetigo, in one family, while others are unaffected, but the former will be obviously out of health and suffering from a fungus dyscrasia. Many of my critics will argue, just as some former observers have already laid it down, that the signs of ill-health are the *result* of impetigo, and we have before seen that favus is thought by some to influence the health, through absorption. I should not dispute the theory that such affections exercise influence on the general health; but I must insist that the dyscrasia is there first, however much more the general health may be influenced afterwards.

As regards the micro-organisms found in connection with impetigo, some observers consider that a particular fungus is the cause of the condition, while Crocker believes that micrococci are at the root of the mischief. In respect to these opinions Jameson writes: "There are few crusts which, if exposed to the air, are absolutely free from such [fungi], and while a fungus has been found, observers are not agreed as to its character." And Stelwagon states that he has also found micrococci "in the maturing lesions, but does not regard them as peculiar to the

disease." I myself should never be surprised to learn that in impetigo of all stages and degrees we have "plurality" of fungi and "multiplicity" of micrococci; but I have no reason to be at all anxious in the matter; I do not mind in the least what other organisms are found, as long as something of a fungus order can be made out to help me in my study of the nature of fungus dyscrasia.

The idea that there is any association between impetigo and vaccination is a ridiculous one, if applied to any other circumstance but coincidence. A child may be suffering from a fungus dyscrasia without having any impetiginous sign of it, and it may be vaccinated at the time. In such a case the vaccinia vesicles may perhaps not appear very healthy. And the slight disturbance of the general health that follows vaccination might well be calculated to exacerbate a very mild fungus dyscrasia existing before.

The treatment of impetigo is admitted by most practitioners to be easy, and there is a reason why they have found it easy. In the first place they have looked upon the affection as one that indicates defective health, while they have never entertained such an idea regarding most cases of ringworm; this had led them to adopt measures regarding the general health that have of themselves contributed chiefly towards effecting a cure. In other words ringworm has been regarded more as a local affection, and impetigo rather as a local sign of generally defective health. The reasons why ringworm has been so

misconceived in many instances have been already referred to.

Taking into account the treatment of impetigo which I shall recommend in a later chapter, and the results to be obtained from it, I confess I have not enough patience to deal with diagnosis to the extent that some authors have done. There seem to me, however, to be so many varieties of eczema, pustules, ringworm, impetigo, fungus, micrococci and dirt, that accurate diagnosis will often be extremely difficult, if not almost impossible; still there is a treatment, and an eminently successful and rapid one, to be directed against dyscrasias, which will make signs and symptoms vanish, no matter how complicated, and therefore why should one bother particularly about differential diagnosis, once one knows this treatment.

I sometimes feel rather sorry that the old word porrigo, used to express "almost any eruption on the head," was not adhered to, and that so much microscope and lens work has been done by researchers, for I feel sure that the subject of dyscrasias would have been better understood, and we should have had heavy books written on various derangements of the general health as they affect the scalp, amongst other regions, instead of on "plurality of fungi." I value microscopical work very highly; but practitioners would have mastered scalp and many other affections sooner if they had investigated the soils of disease to an adequate extent, and had not been so readily induced to believe that all is clear

through a lens. Let us, by all means, go back to the old word porrigo, and study dyscrasias a little; we shall get better results by understanding something of another side of the question.

The glands of the neck are often swollen and tender when spots of impetigo are present in the scalp. But it must be borne in mind that such glandular conditions may often be separate signs of the same dyscrasia that is favourable to the growth of fungus, not always being the result of absorption from any impetigo present. No doubt, in case of pus formation, whether in connection with ringworm, kerion, or impetigo, the glands frequently become affected; but the point I wish to urge is, that mistakes may easily be made.

Aldersmith writes concerning impetigo: "This affection is sometimes thought to be ringworm; while the rapidly spreading form of pustular ringworm closely simulates *impetigo contagiosa*." And further on he notes: "Impetigo of the scalp may be due to the fungus of ringworm."¹ These quotations give a good idea of the different opinions that are held respecting the affections named. Can we wonder at great variety of treatment being adopted, and at puzzling results being obtained, when local diagnosis is so difficult? But there should be little perplexity, at any rate in settling upon a treatment, when these signs are attacked through their dyscrasias.

Impetigo is common in the occipital regions of the

¹ "Ringworm," p. 115.

scalp, and this is especially the case when pediculi are also present. The reader will remember the reference that was made to the subject of sites on which fungus patches are likely to develop in a former chapter.¹

¹ See p. 61.

CHAPTER IX.

PEDICULI CAPITIS.

PEDICULI in the hair of the head could not be expected to occupy the position of importance one would accord to other scalp affections, though a passing glance at the subject may not be uninteresting, and there are certain points respecting soil and dyscrasia that help the main contention of this book.

Pediculi may exist by themselves, or concomitantly with any of the affections referred to in the foregoing. They are said by many to cause impetigo; but it has not been explained very clearly by authors how they do so. I am of opinion that a dyscrasia is necessary in order that pediculi shall flourish, as one is also requisite for impetigo. The scratching consequent on irritation from pediculi sets the seeds of the fungus. In certain cases, however, there may have been scratching with no impetigo following; then either the dyscrasia has not given quite a suitable soil for the fungus, or the micro-organism has not been present in the situation as a seed.

Pediculi are commonest amongst children, and

especially amongst those belonging to the age that fungus dyscrasia is given to selecting. They may occur also in adults; but never without a dyscrasia. They seem to require a less pronounced dyscrasia, however, both in children and adults, than any of the fungus scalp affections. We may see innumerable patients suffering from pediculi capitis, of all ages, without a sign of any other scalp trouble being present; and this applies to those in better classes of society as well as to the poorest. The dyscrasia necessary for pediculi is not so definitely associated with extreme dirt and poverty as that for impetigo or favus; and in this respect it is something like that of ringworm.

It is scarcely necessary to refer to pediculi corporis; but we may be quite certain that dirt alone is not sufficient to produce a favourable soil for these parasites; there must be a dyscrasia. Yet impurity or uncleanliness of person is generally a sign of ill-health. Healthy people not only have instincts revolting against personal uncleanliness; but their bodies do not give off exhalations and skin excretions that are unwholesome to the extent that sickly ones do. A workman may be dirty in a sense, on account of his work and dirty home, but he may be healthy at the same time; such a man will not be so likely to have pediculi capitis or corporis as another who is subject to the same uncleanliness, as far as external influences make him, but who is also suffering from ill-health. I do not care how dirty a person may be found, unless there is some dyscrasia

there will not be pediculi. We shall see, in the next chapter, how much dirt may contribute towards creating a dyscrasia, and how certain circumstances at once produce both of these. We shall see that ill-health conduces to dirt, and dirt to ill-health.

CHAPTER X.

FUNGUS DYSCRASIAS.

THE essential to those manifestations known as ring-worm, seborrhœa, alopecia areata, impetigo, favus and tinea versicolor, is a dyscrasia, or morbid state of the constitution. We should no longer look upon the affections named as conditions *per se*, but as local signs.

As is well known, different substances or compounds are liable to display fungi or moulds on their surface, according as they have been subjected to certain influences of heat, light, moisture, and micro-organisms. We shall find one material prone to producing a mould of one kind and another another. And human beings even have their own particular moulds, should they by chance develop the right dyscrasias for them and be exposed to certain organisms at the same time.

One could scarcely go so far, on the present occasion, as to explain the nature of those dyscrasias, or states of the constitution, we might call them, which favour the moulds of many substances and commodities that are quite familiar to us. We must, however, give this bare justice: we must at least

recognise the fact that moulds cannot make their appearance unless they have appropriate soils to grow upon, which soils will depend upon certain general states of the various substances.

A cheese will not show signs of mould unless the general state of it permit its surface to give a friendly reception and a nourishment to such growth. One cannot place an organism of mould upon any piece of cheese and be certain of its growing at once; the prime essential for life and increase is a suitable state of soil to grow upon, which soil can easily be obtained, in this particular instance, by waiting a little time, until the general state of the piece has shown signs of health derangement, one might say.

Moulds differ in character according as they grow upon different substances, and according as they depend upon different micro-organisms; and some materials are capable of growing more than one species at the same time; this one might expect. The fact that soils differ and moulds differ must be clearly and completely understood. And it will go without saying that the general states of substances differ.

Human fungi have undoubtedly a predilection for a certain age, as is shown by the fact that ringworm particularly likes those between five and nine. This is the first and perhaps most obvious of certain data I have to present to the reader's notice; and I look upon it as of the utmost importance in view of principles of treatment that occupy the space of a later chapter. Ringworm now and again appears in

older people, however, and such exceptions are very valuable, not that they merely prove the rule, but that there are certain characteristics about them that help us considerably in any inquiry we make as to the etiology or nature of fungus dyscrasia. Alder-smith saw only five cases of ringworm of the scalp in adults during twenty-five years. Crocker, Thin and other dermatologists have noted even fewer in their experience.

Have we ever any evidence of the existence of fungus dyscrasia, from its association with concomitant diseases, conditions, or symptoms? At first sight it would appear that we have none whatever, to be relied upon, for, while ringworm frequently makes its appearance in those subjects who are obviously labouring under a derangement of the general health, it is very often found in those who are apparently in good health. The appearance of the former class of sufferers is often characteristic; pale, sickly, frequently thin and ill-nourished, they convey every suggestion of some kind of dyscrasia or other. Most writers and observers have noted a deficiency in the ordinary physical and functional forces of some sufferers from ringworm; but it would appear that any further thought or investigation on this particular point has been pulled up sharply by other cases in which the "*pink of good health*" has been so apparent.

These cases of *apparently* good health are worth our serious and deep consideration at this moment. The question I shall ask, is: Have the subjects been as

healthy as they have looked? I have not the slightest hesitation in stating that in every instance they have not. Considering as I do that ringworm is a local sign of a dyscrasia, I refuse to believe that this manifestation can exist without the suitable soil made by that dyscrasia. Therefore appearance, to me, simply counts nothing, as far as deciding the question of the presence or absence of defective general health is concerned.

The dyscrasia is there if the ringworm is; that is my contention. If the patient looks well, all the better, in one sense; but all the worse in another. There may be less difficulty in combating the dyscrasia in some such cases; but the probability is very great that in most of these cases of *apparently*-good health there is a dyscrasia plus a diathesis to deal with—one of tuberculosis, for instance. I should be inclined to stake more on the length of life that a pale, sickly, ill-nourished child would reach, given chances of improving the general conditions of life in each instance, than on that likely to be attained by a rosy, hectic, and perhaps plump and healthy-looking youngster with a bad family history. I think it extremely likely that the former would develop into a sturdy and healthy adult, and would respond far more rapidly and thoroughly to good food and domestic comforts than the latter. I have had cases which illustrate the fact that fat and robust-looking children, who have formerly suffered from ringworm, are inclined to develop tubercular glands of the neck in later years.

Whether the influence that purulent and impetiginous states of the scalp formerly exercised renders the glands in the region more susceptible to the attack of tubercle later on in life is an interesting question that hardly keeps us to our point but which one cannot help but ask, when considering the association which a tubercular diathesis is likely to have with a ringworm dyscrasia that subsists in some "pink of health" cases. If inflamed glands, caused primarily by scalp affections such as complicated ringworm, render the invasion of tubercle more certain, then there is a further reason why healthy-looking children, having had ringworm, should ultimately suffer from "king's evil" and other tubercular affections.

I have seen cases of ringworm in children who have appeared in the best of health, and whose parents have testified to there being no indication of anything being amiss with the general condition, as far as they themselves could see. Yet, on pursuing the matter still more persistently it has been ascertained that "perhaps a slight falling off of the appetite" and an almost imperceptible indication of "want of liveliness" has been observed. "Nothing to speak of, but not quite so playful" has frequently been the remark of a mother, after much dwelling upon the question whether any symptoms have been noticed.

But very often the mothers of these "pink of health" cases are not able to testify to the very slightest falling-off or failing, in any respect. Now,

with the verdict of appearance, confirmed by such investigation of the body carried out by the doctor, as yields absolutely negative results, and with the evidence of the mother as well, one ought to rest satisfied; and one undoubtedly would do so but for the further undeniable testimony that a certain kind of treatment gives. If such "pink of health" cases as these are placed under a certain general health treatment, what then? They improve in condition; thus showing that the state of health before treatment was not of the best, though no observer, whether professional or parental, could possibly detect this. Put such children under treatment, therefore, and then ask their mothers what differences they have observed; they will testify to "better spirits and better appetite," while previously they could observe nothing.

Again, patients who remain constantly under the observation of doctor or parents do not show those marked differences that are so noticeable to those who only occasionally glance at them: this is quite well known, and it further shows that things are not always what they seem.

"Pink of health" cases of ringworm, therefore, only exist in appearance or imagination. Naturally, some critics might be inclined to ask, what is the pink of health? or, what is good health? to which one could answer, that which *appears* but which is also *proved* to be. A man may appear and feel to be in perfect health before a holiday, though he might confess himself better afterwards.

The question might be asked whether, if ill-health is a dyscrasia, a dyscrasia is a definite form of ill-health. The fact is that all dyscrasias are of course states and degrees of ill-health; but there may be many forms which are indistinguishable to the naked eye. The dyscrasia suitable to fungi may be seen clearly, or it may have to be proved, either by the presence of its symptom ringworm or by a treatment for it which distinguishes at the same time that it eradicates it.

I have a case at present under observation, of advanced phthisis, in which haemoptysis has occurred several times during the past two years. There are cavities in both lungs. Yet the patient appears, under ordinary vision, to be in the very best of health: plump, good colour, good appetite. All this is seen when the patient is looked at from a little distance, and while she remains still. But the breathing is found to be abnormal under close and skilled observation, and signs and symptoms are at once detected on movement. Such a case serves very well to show that in the study of disease we must not be misled by appearance alone. When in doubt, try for a gumma by the potassium iodide test; if a throat baffle the best of surgeons do not forget salicylate of soda; if obstinate patches of ringworm occur in a child that *appears* well and hearty, adopt the treatment recommended in the concluding chapter of this book, notwithstanding.

To any one making a study of ringworm and reviewing the methods of treatment that have been

adopted, I do not think there is anything more interesting and instructive than instances of spontaneous cure. That cases which have defied all the ingenuity and learning of the specialist, year after year, should so stultify the efforts of eminence as to turn round and say, as it were, "You have all done your best and miserably failed; now I will get well quickly by myself," is a representation that may well drive researchers to despair.

But such cases will not only be simply stultifying and galling, they will point their lessons. They will show that there is a soil for ringworm, which soil is begotten of a dyscrasia, which dyscrasia tends to vanish under certain circumstances. Authors are all agreed that the time when spontaneous cure is likely to take place is "about puberty." Whether puberty is a natural antagonist to fungus dyscrasia—and other dyscrasias for that matter—is a very debatable point. The probability is that at this period such energies spring into existence, through sheer force of growth and development, as fortify the body and give resisting strength to the system, so that dyscrasias of all kinds are turned out and kept at a distance.

Some might be inclined to ask, after reading this theory, why anaemia should be so prevalent about the age of puberty and a little after. Why does it not also disappear? Therefore I had better take the opportunity at once to point out that chlorosis is scarcely a typical dyscrasia. A remarkable fact about this disease is that it seems to be antidotal, and

not inviting to disease. It may appear paradoxical to make such a remark, but there are few so healthy as those who have chlorosis. Girls who are afflicted scarcely ever contract anything else the while, unless it be some trifling derangement of stomach, bowels or nervous system. What few cases are on record of marked chlorotic subjects contracting specific fevers for instance! This peculiar fact may not have been regarded by many observers: none seem so proof to specific disease as chlorotics. At puberty there is a spreading out or growing forth of antidotal energy, making a sturdy and thick-armoured vanguard which is ready to lead the young adult forth boldly against the dread battle array of disease. At this stage of existence any lurking and obstinate dyscrasias will undoubtedly receive a severe rebuke, and that of fungus growth will be pitched out mercilessly.

There is an age for every disease, and also a soil. We know that children under a certain age do not contract some of the infectious diseases. We also know that those under ten are prone to diphtheria while adults are not so; and they are also liable to ringworm and whooping cough, while adults hardly ever—if ever—get exactly the same kinds of disease.

Is it the case, then, that certain ages invite certain diseases, no matter what other conditions may be present? Is it that children under ten *must* suffer from whooping-cough and ringworm, provided the micro-organisms of these diseases settle upon them? It is hardly necessary to reply that it is not. At certain ages

certain dyscrasias tend to develop, which dyscrasias produce soils that are favourable to particular diseases. It must not be understood that certain ages *compel* the development of certain dyscrasias: that is to say, children are not *obliged* to have dyscrasias simply because they are at the right age for them. It is necessary that certain sets of circumstances should be at work at this favourable age. For instance, school life, with confinement at home for the rest of the twenty-four hours, on account of peculiar ideas of parents, wet weather, or something of the kind, all endured over a period of many weeks or months, will provoke certain kinds of dyscrasias in children which could never be produced in adults, for particular reasons: firstly, the natural constitution may be less capable of resisting certain forms of disease in childhood; secondly, adults never have to live a school life exactly, and if they have, more or less, as clerks or school-masters, their after-hours are utilised in a manner so very different to the leisure of sit-in-the-kitchen and early-to-bed milk-and-bread-fed children—in adults the very same childhood dyscrasias seem impossible; and thirdly, the dispositions and energies of child life are conducive to the development of certain kinds of dyscrasias which an adult brain, by its stronger, more varied, and elaborate working, would forbid.

But, further, I want to impress upon the reader the fact that children have a nervous system. In adults, it is only too well known how unfavourable surroundings will affect not only the health directly,

but the mind also, and the health a second time through the mind; how reverses in fortune, insufficient food, bad housing, and low spirits, or worry, will all contribute to make a kind of dyscrasia, which produces a soil that may itself be suitable for many diseases and affections. So with children; school work and unpleasant home life, with scant means of procuring comfort and good food, act directly on the general health, and also on a child's mind or spirits; then, low spirits again influencing the health, a dyscrasia is the result, which may be of a kind that produces soil suitable for whooping cough or measles, ringworm or impetigo, as the case may be. I shall have something more to mention regarding the influence that illness has on the mind of a child, and the effect low spirits or depression or worry have on the general health, in the next chapter.

Children whose heads have undergone spontaneous cure have therefore gone through certain transition stages, on account of changes from one class of diet to another, or from one environment to another, or from one degree of physical and mental development to another, or even from one treatment to another, or from one employment to a slightly different—as regards the nature of it or the number of hours engaged—and the fungus dyscrasia has thereby been driven forth, together with its ringworm sign.

Is it possible to describe fungus dyscrasias, tracing them from the beginning to the end, mapping out their limitations and making a circumscribed and

definite whole out of each one? Scarcely—any more than it is possible to describe influenza as accurately as we might make out specifications of a motor-car. But, notwithstanding, in this chapter I shall attempt to give an intelligible idea of what I mean by the term.

The dyscrasias that produce soils suitable for the growth of ringworm, favus, alopecia areata, and some other fungus affections are subject to variation according as age and mode of living regulate. When attacking children under ten a fungus dyscrasia produces a soil that is favourable to the growth of ringworm and impetigo: ringworm may occasionally be found in adults, but not usually affecting the same regions or manifesting the same disposition, and not even showing the same pathological character as ringworm of children; when attacking adults it produces a soil that is favourable to seborrhœa or alopecia areata.

It has long been considered that a certain soil must have something to do with the development of ringworm. Turning again to Aldersmith we find it written: "All children do not appear to be equally susceptible to ringworm. A certain unknown condition of the skin is necessary for the growth of the fungus, as some children do not take ringworm, though constantly exposed to infection. For it is evident that when one child in a family has ringworm, and is untreated, the others are very likely to be exposed to the action of the fungus; yet, at times, the disease does not extend, though, as a rule, it does, unless precautions be adopted. The fact that

brothers or sisters, in a family with one chronic case of ringworm, remain free from the complaint is often used as an argument by parents to prove that their child is not suffering from any contagious form of disease, and is in a fit condition to attend school. In some children the fungus takes but slight hold, and is easily destroyed; while others are extremely susceptible, the disease quickly attacking the hairs and spreading with great rapidity, even under good treatment."

It is not at all surprising that one child of a family may take ringworm and others not, when we realize that rarely can any two children of the same family be found alike. Some will be delicate and others ordinary, while now and again one will appear to be above the average shown by most children. The young members of a family develop and grow up along the lines of least resistance, as it were. Perhaps a prolonged bronchitis will lead to a hot-house life for one of them, which will provoke a dyscrasia of one variety or another. Then, again, disposition to romp and play about will give one an advantage over another whose temperament will perhaps lead it to play with toys the whole day long in a stuffy nursery.

Moreover, the ideas of parents regarding the bringing up of their children differ so widely, and very special attention—even sometimes coddling—may be bestowed, with every good intention, because some sort of delicacy has revealed itself; but a definite dyscrasia may be thus *created*, notwithstanding.

Therefore, the plain fact must never be lost sight of, that two things are necessary for the development of fungus spots, a soil and a micro-organism. Two or more children of the same family may have a suitable dyscrasia, producing its favourable soil, while only one takes ringworm, because only this one has received the organism from somewhere, the others having been kept from contagion. Again, one child of a family may have ringworm and mix up with three or four others without giving it to them, because this one only has the dyscrasia suitable. Still further, suppose a child with ringworm to be living with others who have not the dyscrasia, it is quite possible for the latter to *acquire* the dyscrasia, on account of changes of habit or environment. If such a set of children were forbidden to mix with others, and were made miserable in consequence, only being allowed to play about at home, on account of one case in the family, their health would be likely to suffer. Dyscrasias are often produced in this way. Precautions against spread have frequently been the means of precipitating dyscrasias of more than one kind, among children who have been formerly fairly healthy, as wise as such precautions have appeared to be at the time.

“In some children the fungus takes but slight hold and is easily destroyed; while others are extremely susceptible.” Concerning this statement, I offer the explanation that dyscrasias vary in severity and therefore their signs must. But many of the quickly cured cases mentioned by observers have no doubt

been subject to influences that have entered on the scene accidentally and unrecognized, at the same time that local applications have been used; and the latter have gained the credit, or the case has been pronounced mild, as the case may be. There is an old belief in some parts of England that warts on the hand may be cured by means of a black snail. The warts are first rubbed with the snail; then the snail is nailed up on a wall, the belief being that as the snail shrivels-away the wart dies. No doubt warts have disappeared frequently after such a procedure; but the same ones would have vanished in any case, snails or no. There have been many instances where compounds have been applied to ringworm which have had more obvious local effect than the rubbing of black snails could produce, yet the ringworm has not disappeared on account of these local applications but on account of something else not known or dreamt of.

Tilbury Fox thinks that a dislike to fat which children suffering from ringworm frequently manifest "has a most potent influence in leading to the development of a condition of nutrition which is favourable to the occurrence of obstinate ringworm." I am glad to note a clear suspicion of the presence of a dyscrasia in these lines, but I do not think for a moment, however, that there is sufficient reason for marking down cause and effect so definitely as Tilbury Fox has done. If one were to stop altogether the eating of fat in any sound child I would refuse to believe that a tendency to ringworm would

be created—or even increased in one already suffering; nor would I imagine that the eating of fat would cure ringworm. As against this fat-eating theory my own idea is this: that ringworm dyscrasia is often characterised by such defective general health, and such an atonic state of the digestive and other forces, that fat cannot be taken properly. If this dyscrasia were properly treated, fat would be taken ere long, and ringworm would vanish. Ringworm is a sign of a dyscrasia, and dislike of fat is a symptom. But one must always carefully bear in mind, however, that dyscrasias may be compound and complicated. There may be a strumous diathesis in association with a fungus dyscrasia, as has been before referred to, and the dislike of fat may very likely be a symptom of the diathesis only.

There are certain methods of treatment, yet to be described, which give the very best proof possible of the existence of a fungus dyscrasia, and to some extent they help to point out the nature of it. They demonstrate the fact that it is a peculiar form of general atony, which may exist in association with definite diatheses, or may be so single and subtle as to almost escape detection. After all, loss of tone is quite relative, and often quite imperceptible. A comparatively thin, pale person may have good health and an iron constitution, while a robust and rubicund countenance may mask a system that reeks with inherited disease—one that might require very little activity before it landed its possessor into eternity. Constitutions are often very curious and confusing,

but by their behaviour under treatment “ye shall know them.”

That there may be varieties in fungus dyscrasias has already been pointed out. The dyscrasia that yields a soil favourable to favus is very different from that necessary for ringworm, as may be judged from the following facts:—Favus is almost exclusively confined to the lower classes; ringworm may often be found amongst children of the well-to-do. Better food and cleanliness have been instrumental in lessening the number of cases of favus at the present day, while these measures alone have not met with quite the same success in the case of ringworm. Scotland is one of the homes of favus, while England is hardly hospitable to it. Favus seems to insist upon a congenial soil more than any of the parasitic diseases; practically all authors are of opinion that there is more need of attention to the general health in the case of favus. And, again, the dyscrasia of favus has generally appeared to be easier to cure than that of ringworm; not that a dyscrasia has ever been distinctly recognised as such: I should have remarked, more correctly, that cases of favus have been known to get well on removal to hospitals, or on improving the diet, etc., quicker than ringworm patients have done under the same treatment.

The fact that favus is so often found to be associated with a tendency to phthisis is also one that helps us to appreciate the fact that dyscrasias differ.

But though there is every reason for believing the dyscrasias of favus and ringworm to be of a different

nature, there are points of similarity which entitle one to speak freely of both as fungus dyscrasias. Having dealt with the subject under the head of etiology, it is not necessary to refer again to the probable causes of the difference between the fungus dyscrasia of favus and that of ringworm.

Because favus is inclined to attack those who are dirty in habits, who live under the worst hygienic surroundings, and are badly fed, and because ringworm does not show so readily and universally this same disposition—taking everything into account—it would scarcely be too gratuitous or unreasonable to suppose that favus dyscrasia, though very similar to that of ringworm, has been produced more particularly by prejudicial circumstances of feeding. Would one be entitled to come to this conclusion rather than hold the idea that ringworm tends to develop in a soil belonging to a dyscrasia that is a modification of that specially chosen by favus? I certainly think so.

Varieties of ringworm have been studied in India and China which some authorities have considered to be cases of ordinary ringworm that have presented various characteristics on account of circumstances of heat and moisture. Patrick Manson, however, pointed out that *tinea imbricata*, or Tokelau ringworm, "is a specially distinct affection, with a peculiar fungus, and that it is not an ordinary form of *tinea circinata*, modified by climate." Sabouraud considers it likely that several forms of ringworm in the East are due to distinct species of fungus. But it seems to me

extremely likely that there are both different species of fungus and different dyscrasias.

It might help us to understand something of the nature of ringworm dyscrasia if we carefully inquire into the interesting fact that ringworm is particularly common in London. There must be a reason why this should be so, and I am of opinion that it is to be found in the habits and customs of the people. The children of Londoners would be likely to develop exactly that kind of dyscrasia favourable to ringworm; for the life of many of them is spent for the most part in school and at home. A certain amount of street existence is perhaps obtained between-times, as a trifling variation, but this is not enough change to influence the tone of the general health in many instances.

Contrast the mode of life of most London children with that of average country or even provincial town specimens. The latter have more opportunities of obtaining just those little bits of variety, those skips and romps, those daisy-pickings and field-rambles that help to keep up the constitution to a healthy and vigorous pitch. A good many London children only see green fields once or twice a year, it may be for a few hours only.

The question as to how much dirty habits and surroundings really have to do with the existence of ringworm is certainly an interesting one. Aldersmith writes: "It is a mistake to think ringworm is due to dirt and want of personal cleanliness. Dirt affords no pabulum for the fungus to grow in, but, perhaps,

the very reverse. Of course, neglected children with dirty heads are more liable to be exposed to, and therefore, to take the disease. Yet it constantly occurs where children's heads are kept clean, and where proper care is taken. In spite of all precautions as to cleanliness, some of the other children in a school will probably contract ringworm, if an untreated case be accidentally admitted into it, no matter from what class of society the pupils be obtained. Again, ordinary washing of the head does not prevent the fungus from developing, if it effect a lodgment on the skin. It is a curious, but certain fact, that in a large number of the dirtiest children (girls) I ever examined, in order to see the percentage of ringworm amongst them, and where only two per cent. had tinea tonsurans, I actually found ninety-eight per cent. suffering from nits, or even pediculi! It made me wonder whether dirt and other troubles help to prevent the spread of ringworm? It is worth following out; for, as will be seen, I found a smaller percentage of cases of tinea amongst some very dirty board school children, than I have found in examining boys for admission into Christ's Hospital."

I consider that one may easily be misled over the question of dirt. It may be a fact that dirt leads to illness; but it is equally true that illness leads to dirty habits, and to general neglect of both person and surroundings. Ought we to consider dirt as a causation of ringworm? or ought we to suppose merely that poor circumstances produce certain things, amongst which are dirt and ringworm? I

have no hesitation in giving my opinion that the latter would be nearer the truth, by far. Dirt so often accompanies ringworm, pediculi, and also some other affections, that it might readily be supposed that it causes these, or is largely instrumental in producing them, while the real truth of the matter is generally this, that poverty and low spirits produce both. But it is really working beside the point to pay very great attention to the effect of one upon the other. I would put my argument thus: Certain circumstances of living, or that surround an existence, may be such as to cause poverty, hunger, dirt, *and* dyscrasias; certain of the latter being particularly favourable to the growth of fungus.

Let us further study the circumstances that make for fungus dyscrasia and dirt, that provide both of these for a large number of children of lower London, and that determine dyscrasia alone when dirt is impossible? Let us carefully scrutinise some of them. Firstly, a want of proper hygienic surroundings may appear at first sight a circumstance that would affect only the poor; to conclude this, however, would be quite a mistake. Children of the better-to-do, or even rich, are sometimes unwisely looked after; they are often so coddled, having their activities limited, that they are compelled to remain for the most part in a vitiated atmosphere. And is it not true that house drainage is frequently found defective in a large number of houses belonging to the well-to-do—almost in as large a proportion, in these days of inspection and

sanitary legislation, as may be found amongst the dwellings of the poor?

Secondly, want of change or variety is a circumstance that may very well apply equally to all classes. Nothing conduces so much to loss of tone in general health, or to the development of dyscrasias of all kinds, as monotony of action or thought in a child. Youngsters shut up in nurseries, or permitted very little change—by force of house situation, or on account of peculiar ideas of their parents—beyond their board-school and home-kitchen life, will be likely to develop such sluggish energies and depressed spirits as lead to a stagnant state of the general health; while those who have every opportunity given them for plenty of variety in everything that is healthy will remain proof to most ills.

“Only” children and those of peculiar or narrow-minded parents—people having rather strange ideas concerning the bringing-up of children—are very liable, as are the youngest of some larger families, to be brought up under such general conditions as lead to dyscrasias; they are *made* delicate in fact, in very many instances.

As regards want of variety or healthy change, I shall have something more to discuss in the chapter on treatment; but I feel bound to refer, at this particular stage, at least to one very important point. The very same circumstances that lead to the development of dyscrasias are, when a local sign such as ringworm takes possession of the subject, very often exacerbated or increased by the addition of measures

that are adopted on account of that sign. For instance, perhaps a child has been brought up under such conditions as favour the development of ringworm dyscrasia; when ringworm appears, that child is segregated and kept from all others, drawn from its happy and playful surroundings, and kept apart or isolated in a manner that must have a very marked effect on the general health in most instances. So that the very dyscrasia that is at the root of the trouble is rendered more pronounced than ever; hence so many cases of ringworm that are protracted and that require years, many years perhaps, to cure. Local applications may be applied without end, but the mischief is kept going or increased by those very measures parents and advisers have deemed expedient or advisable to adopt. I am of opinion that practically all the difficulties that have been found regarding the treatment of ringworm have arisen through a want of recognition of a dyscrasia, which itself really requires a mode of procedure levelled against it diametrically opposite to what is generally advised and followed out for the ringworm alone.

A child suffering from ringworm is, under the average control of the present day, the most miserable little object in existence; a condemnation to Devil's Island or to a leper colony could hardly be worse for it. Taken from others, kept from observation on account of the horror people have of this unsightly scalp affection, exiled at the most frisking and joyous time of life, even looked upon by some parents as a distinct trouble—"a nuisance,"—under such circum-

stances a case of ringworm is often made—positively made—chronic and obstinate.

And what about food? It is true that in the case of the poor, insufficient and improper food has a great deal to do with the creation of dyscrasias of all kinds. But can we state definitely that food has so much to do with the development of ringworm dyscrasia while we observe that children of the well-to-do and well-fed suffer from this affection? Yes, I think we can. Let us first see whether the children of the better classes are well fed at all times. If they are quite well in health they take the good food that is given them. But supposing one thing or another takes away their appetite, not the school-and-kitchen life of the poor, but the school life under a governess, and the equally limited life that child-worshipping parents—coddlers, petters, or people with narrow notions—believe in, then they are really in the same receptive state as poorer children; certain conditions have combined to create a loss of tone, which loss may be associated with struma or any other diathesis, or may be quite uncomplicated, and a dyscrasia is produced which favours the growth of a fungus.

As far as the conditions requisite for the origin of ringworm dyscrasia are concerned, it does not seem to me to matter much whether a child is badly fed because it cannot get what it ought to have, belonging to poor parents, or because it has been subjected to unwise and unappetising treatment of better-off parents, the child does not derive benefit from good food in both instances, not wanting or not being able to digest

what it has every chance of having in the latter. The fact must not be overlooked that the more tempting food of the well-to-do may be desired and freely taken by ailing children of the poor; but what more tempting food is there for sickly children of the well-to-do than that they usually have—unless it be something not so wholesome or suitable as a diet? Where is it to be found? There is no palpable food to be had from the gods!

The presence of pediculi in a head undoubtedly indicates the existence of a dyscrasia, but this does not appear to be always *precisely* the same as that suitable for the growth of ringworm. Aldersmith found ninety-eight per cent. of some dirty children suffering from nits or pediculi, while only two per cent. of them had ringworm. The fact that many children of well-to-do parents will also have pediculi in their heads, if not very carefully looked after, and *if not kept from mixing with the poor*, helps to prove the demand pediculi have for a suitable dyscrasia.—Dirty and poor children having a dyscrasia will get pediculi; moderately clean well-to-do children with a dyscrasia will get pediculi—if exposed to infection; again, scrupulously cleansed well-to-do children with a dyscrasia, and with opportunities of becoming infected from others, may remain free, because the organisms may be washed or brushed away before they have time to take root.

There is still further evidence to show that the dyscrasias of scalp ringworm and pediculi are slightly different; pediculi will flourish in those adults who

have the necessary dyscrasia, while ringworm of the scalp will not attack them. But I have observed cases in which pediculi have been present in the heads of adults and *body* ringworm at the same time.

I think it extremely likely that a subject can only support one kind of dyscrasia of a class, sufficient to produce the soil for a certain kind of disease to grow upon. For instance, I think that a child who happened to be afflicted with the dyscrasia suitable for the growth of ringworm would not be likely to sustain the dyscrasia of favus as well, or *vice versa*. I am also very much inclined to think that such a child would not be so likely to develop any of the dyscrasias suitable for such diseases as scarlet fever, measles or diphtheria—and I may as well mention again that I believe all such diseases as these have predisposing dyscrasias. Very rarely do we find one of the specific diseases break out in a child suffering from ringworm: though isolation may also have something to do with this.

Aldersmith contrasts children of the poor and dirty with boys examined for admission to Christ's Hospital, and points out the latter as showing a larger percentage of ringworm. He writes:—"In 1894, Dr. B. Abraham and I (with the kind permission of the medical officer of the School Board for London) carefully examined about six hundred children (boys and girls) of all ages, to see the percentage of *tinea tonsurans* existing amongst such poor children. We purposely chose two of the most suspected schools

in London ; and, certainly, containing some of the dirtiest and worst neglected children attending the board schools. We only found three per cent. of the children with ringworm, but we heard that some were at home with this disease. This result very much surprised us, as we expected to find a much larger percentage. Ringworm may exist, and probably does, in a much larger proportion than this in other elementary schools, but it is certain that we only discovered half as large a percentage as I have done in examining children for admission to Christ's Hospital."

Such a comparison is interesting. But there will also be found something highly instructive in a study of these two classes of youngsters referred to, if an investigation be made on other lines, and further. Aldersmith presents his facts chiefly in order to show how little dirt has to do with the genesis of ringworm, and very valuable his testimony is. But the point that needs further investigation is this: Why should there be twice as large a percentage of ringworm found amongst children examined for admission to Christ's Hospital than could be found by Aldersmith and Abraham in their examination of "likely" and suspected schools? There must be a reason!

I have previously pointed out that dirt often accompanies fungus dyscrasia, but that it does not of necessity or particularly act as an auxiliary causation beyond influencing the dyscrasia in a manner that dirt may be expected to do in the case of any other

dyscrasia. A fungus dyscrasia is begotten of such conditions as sometimes also lead to dirt: this is another way of expressing my meaning.

What are, therefore, the conditions that lead to dirt and ringworm dyscrasia, found among the children of the poor on the one hand, and cleanliness and ringworm dyscrasia, found among boys presenting themselves for admission into Christ's Hospital on the other? There are several, but I will single out four. Beginning with poverty, I would draw attention to the fact that boys of better classes are very often just as poor *in proportion* as children of the lower classes. Frequently they are orphans—I cannot be certain of the proportion—who have been left very scantily provided for. And there is hardly any occasion for giving an elaborate exposition of the effects of poverty on health—or on a ringworm dyscrasia, or on dyscrasias generally; the reader will perhaps spare me this.

The mention of poverty is almost sufficient to indicate insufficiency of food, as constituting the second of the four conditions. Children of the lower classes are often badly fed because they cannot get enough. Those of the better-to-do may be able to get enough, but perhaps their appetite will not prompt them to eat, partly because the food is not sufficiently tempting for them in their station of life—not so varied and luring as it was before their parents died and they became poorer. In either case, therefore, insufficiency of food will be found an important condition and one worth bearing in mind in all cases.

Defective hygienic surroundings will help, and

may be mentioned as a third condition. Concerning the lower classes this condition needs no explanation, but a moment's reflection will bring it to the reader's mind that candidates for Christ's Hospital will often have suffered so much under reduced circumstances that a removal to a smaller house or to cheap lodgings—almost sometimes as a stowaway—will entail some diminution in general hygienic advantages.

It must constantly be borne in mind that the effects of dirt, poverty, insufficient food, bad hygienic surroundings, and a fourth condition yet to be referred to, are, after all, relative. What may be considered dirty habits for a duke may be cleanliness itself for a pauper. A hundred a year may be abject poverty in the eyes of a baronet, but may be deemed comparative affluence to a labourer. A knight may see visions of starvation in the steam from a skilly kettle, while good oatmeal porridge will seem a feast to a Scotch tramp. A clean country cottage might be perceived stuffy to one accustomed to spacious halls.

Mental trouble is the fourth condition of the set which I have selected in order to demonstrate the probable origin and nature of ringworm dyscrasia. The death of a parent, or the obvious distress of a father who had suffered heavy pecuniary losses, may create such depression and despondency in a sensitive child brought up in luxury that would not be likely to take possession of a cheerful child looking on at the revelry and hilarity of an Irish wake, for instance. But the youngster of the slums gets its

bouts of low spirits all the same—after seeing the “strap” applied to its mother, or after getting a “taste” of it itself. It will also run away fearful and hurt upon receiving some of the meaningless bullying that a drunken, threatening and foul-mouthed father is dealing out right and left.

The candidate for Christ’s Hospital has generally gone through his troubles, therefore. It would be wasting space to sketch the life-history of a sample half-dozen of such boys.

It is true that instances of sons belonging to parents who have “come down in the world,” or who are dead, will be found side by side with those who have had no history worth mentioning. Amongst the whole class, however, a large percentage of mental anguish, trouble, or worry will be found to have laid very definite hold upon the system, upon those forces that make for good health, and to have created dyscrasias of various kinds, not forgetting the one suitable for ringworm.

In closing this chapter I have a desire to again refer to the fact that a dyscrasia gives the most necessary condition for the origin of ringworm, but also that ringworm is liable to foster and further its own dyscrasia. Hence the apparent or actual incurability of some cases. First a dyscrasia, then its sign ringworm, then the dyscrasia further fashioned and fixed by that local affection. Result: chronicity, or incurability.

How is ringworm liable to favour its own dyscrasias? In the first place, any affliction is apt to put down the

spirits of the sufferer—and therefore the physical and mental tone—lower than they were before; and ringworm is as much likely to do so as any, because it is rather a loathsome trouble and conveys ideas of uncleanness. Certain diseases and affections are liable to cause greater mental distress than others, as is well known.

Then, the treatment that has been commonly adopted has also brought its own evils as we shall presently see, and isolation or segregation have created their mental and physical influences for the worse.

One might refer to the expense and trouble that ringworm brings upon parents or guardians, causing often such want of consideration and patience that could not possibly bestow anything else but an aggravating influence upon the dyscrasia. Afflicted children are very apt to be looked upon as an everlasting trouble, and often parents lose sound interest in sheer annoyance and despair.

I shall not refer to the dyscrasias of alopecia areata, seborrhœa, or any other fungus affections at any length because they are created by almost exactly the same set of circumstances as produce ringworm dyscrasia. The theories that have been advanced in this chapter concerning the origin of the latter will very well stand for all, if differences due to age are taken into account, and if it is remembered that the physical and mental processes or energies of children and adults differ.

CHAPTER XI.

TREATMENT.

I READ with considerable interest in an 1898 number of the “Edinburgh Medical Journal” a review, written by Jameson, of Malcolm Morris’s latest edition of his well-known work on ringworm. I will quote the last few lines of it:

“The descriptions in Mr. Morris’s book are so full as to provide an unmistakable picture, and are couched in such easy language that they are delightful to read quite apart from their scientific merits. But when from the clinical, microscopical, and pathological details we turn to the practical part, that of the treatment, we find, alas! that we are no nearer the solution of the problem of the rapid cure of scalp ringworm than before. All the remedies which have from time to time been suggested are passed under review, and notwithstanding the many new introductions, it is shown that we must still rely on our old-tried friends. Morris places chrysarobin in the first rank, then sulphur and mercurial preparations, but *longo intervallo.*”

After all these years, after so much searching and

researching, the very greatest authorities have to confess that they "are no nearer the solution of the problem of the rapid cure of scalp ringworm than before."

My readers will already have comprehended from the foregoing chapters of this book that I account for the fact that such a record of failure as the above pronouncement confesses ineontinently arose to put its condemnatory seal upon the eoncentrated efforts of fallible man in this way: organisms have been hunted for and studied while soils have been practically disregarded; an undying faith in Allah has led to a blind and headlong rush to defeat, so to speak; the word of command *cherchez l'organisme*, has driven an army of researchers to a huge accomplishment of virtually nothing.

It seems very strange that some peculiarity of soil should have been mentioned by distinguished observers but that this has not been followed by any particular efforts to puzzle it out. There are people who consider it likely that some day bicycling will lead to loss of the usual uses of limbs, because the fashion and fascination of it will be the means of excluding many other modes of exercise and progression; and I can sympathise with this idea when I observe that the microscope—good as it is—has seriously threatened to deprive certain means and lines of investigation out of all chances of holding their own.

Aldersmith commences his chapter on treatment thus: "The probable time any given case of tinea

tonsurans will take to cure depends chiefly upon the extent of surface involved by the disease, when the case is first efficiently treated. The age of the patient, and the variety of the fungus, have also to be taken into consideration.” And a few lines further on he writes : “ There is no doubt that the nature of the soil, as before mentioned, has much to do with the spread of ringworm. What the special condition is that favours the spread of the fungus so rapidly in some cases is not known. Some children seem to have a remarkably suitable soil for the fungus to grow in ; and, in such, the disease may spread so rapidly as to cover the whole head before it is well taken in hand. Such cases are often most difficult to get quite well.”

Nothing further is vouchsafed regarding the nature of the soil ; it is simply mentioned and done with. And Jameson also notes in his work on skin diseases, that “ all children exposed to infection do not contract the disease ; a congenial soil is necessary, and this is not present in everyone, nor in the same child at all times.” Neither has this authority ventured any further as regards the nature of soils.

Morris seems to steer further away than anyone from entertaining the possibility of suitable soils being produced by certain states of the general health. He says: “ The older writers laid considerable stress on the constitutional state of the patient, believing that the trichophyton found a more favourable situation for its growth in strumous or delicate children. The affection, however, is purely local,

and I attach more importance to peculiarities of structure in the epidermis and the hair than to the condition of the patient's health." And the same author writes thus of a certain form of ringworm: "A spontaneous cure often takes place with great rapidity, thus giving an undeserved reputation to various quack remedies. The reason of the rapid recovery in such cases is by no means clear; it may possibly be owing to some structural peculiarity in the hair or skin." He will not allow, or does not imagine for a moment, that changes in the general health has had anything to do with these recoveries.

Now, the probability is, that visits to quacks, who have sometimes lived at a distance, have roused up stagnated systems, have provided healthy exercise perhaps, and have stimulated depressed spirits; all such changes together may succeed in so altering the state of general ill-health that dyscrasias and their signs with them will simply vanish, apparently of themselves, in spite of what has been rubbed in.

A late eminent throat surgeon once operated three times on a patient without relieving some throat symptoms; but these afterwards quickly vanished when a general practitioner, who considered that the complaint was due to a phase of indigestion that had become exacerbated by improper feeding, administered appropriate stomach medication. Many similar cases could be recorded in different departments, showing that too great a concentration in one line of investigation and practice, is very apt to lead to dis-

regard of other sets of manifestations which are not for the nonce observed or considered to be of importance. I consider that ringworm has been over-studied by many, and that *cherchez l'organisme* has sent pathologists and others after a red-herring scent all this time.

Had the same amount of labour been expended on the study of soils and general health that has been lavished on the solution of the "plurality of fungi" mystery, and that has been wasted in experiments with caustics, parasiticides, epilation, vesicants, in all their multitudes, there would not have been half so many books on the subject or anything like so many obstinate scalps left to deal with: a few instructions as to mode of living, a little medicine, and the local application of a simple ointment perhaps, would have been found all that was necessary for cases that required months and even years to cure.

Though I distinctly aver that ringworm is dependent upon the general health, and so run deliberately contrary to the highest authorities, I should be the last to deny that there are some cases which will be found rather difficult to cure; *but these only help to prove my main contention, however.* Those cases which appear obstinate in the face of the usual treatment I adopt I do not look upon as bad cases of ringworm, but merely as being troublesome in the matter of general health. It is neither the ringworm nor the kind of local application that worries me in such instances, it is the dyscrasia. And we shall see where the difficulty—if it may be called a difficulty, in

comparison—comes in, when we recollect that this dyscrasia is sometimes compound or complicated.

Jameson says that it is especially in anæmic, fair, and lymphatic children that ringworm of the head is obstinate.¹ And Malcolm Morris bears similar testimony to the susceptibility and severity that is peculiar to the thin, pallid, fair, and sickly.² Both Jameson and Malcolm Morris are right, without a shadow of a doubt, in their observations. Such cases as they mention do present the greatest amount of difficulty, and this I attribute entirely and simply to the fact that the delicate general ill-health in these youngsters produces the very soil on which ringworm fungus thrives and spreads—and for the time we need pay but little attention to species or “plurality.”

There *may* be differences of type seen in the local manifestations, and even of severity, due to differences of species of fungus. Such differences might be clearly distinguished if we could possibly select cases for comparison in which the general ill-health happened to be exactly alike, while the ringworm fungi belong to different species. But such an investigation would scarcely be worth while conducting in the face of my main contention—that *all* fungi are favoured by certain defective states of the system.

Accepting the authority of Aldersmith and Malcolm Morris, who contend that fair-haired children are more susceptible to ringworm than dark, we have a further confirmation of the very old opinion that fair children are more delicate than dark.

¹ “Diseases of the Skin,” p. 559. ² “Lancet,” Jan., 1881.

Malcolm Morris attaches "more importance to peculiarities of structure in the epidermis and in the hairs than to the condition of the patient's health." He hints at soil in his word "structure," but he entirely runs beside any consideration of the cause of such structure of epidermis and hair. Has he not noticed the tendency to dryness and brittleness of hair so commonly shown by patients—not necessarily suffering from ringworm—who have been labouring under certain forms of general ill-health? One observes in such subjects a want of moisture, a tendency to dishevelment, and a reluctance to curl and wave in regular and natural order. Sometimes the hair will be loose and will fall off also. Has the general health had nothing to do with the mal-nutrition of epidermis and hair in such cases? Would Malcolm Morris argue that such states of skin and hair are things to be considered of themselves, and not at all belonging to any condition of the whole system? Surely he would not!

We recognise disease by signs and symptoms, but it is possible for derangements of the system to have no very distinct mark for detection. We may have a fungus dyscrasia without ringworm, if no micro-organism shall have found out the soil. Therefore, scrofula and ill-health, fair hair and fine skin, have been seen, and they have not been seen; but we must not draw final conclusions from such indications alone.

Instances of spontaneous cure of ringworm are extremely instructive. They have demonstrated several things of importance. They have pointed

the finger of scorn back upon the practitioner who formerly failed; they have cried alas! for all the trouble that was once wasted upon them. Could there be any more scathing comment upon past methods of treatment than these cases provide? Could there be a more powerful denunciation or back-handed rebuke levelled at struggling researchers into the etiology and treatment of bodily affections for their failure? Truly, humanity is fallible, if anything in the world ever was!

An author writes, "When puberty is reached, about the age of from fourteen and fifteen, ringworm of the scalp becomes much more manageable." How ingenuous, and yet how true! Of course it becomes more manageable, because it is curing itself, or, more accurately, because the changing general health is curing it. One might as well say that a lunatic becomes much more manageable when you paralyse him with a draught, or that a man is more docile when you hypnotise him.

There are some who have tried to explain matters —who have argued that at the age of puberty, or thereabouts, ringworm fungus cannot enter the hair shaft. But, as Aldersmith smartly points out, "this fact could not kill the fungus already existing in the hairs. Even if they are saturated with the fungus, ringworm almost always gets well spontaneously from about fifteen to sixteen."¹ This solution given of the spontaneous-cure problem would therefore appear to be one of the most elementary, short-

¹ "Ringworm," p. 41.

sighted, and gratuitous that could be found in the whole literature of ringworm.

Aldersmith asks, "What happens at this time to the skin or the hairs that prevents the fungus from living?" But I am of opinion that he ought rather to have asked, what happens to the general health that the skin and hairs now resist the fungus. Suppose we had to investigate the etiology of the fungus on a loaf of bread, we ought not to proceed to turn lenses on the fungus itself, and, getting puzzled, proceed to inquire into the exact state of the bread's crust alone; we ought really to try and find out what has caused the whole loaf to so change that fungus tends to grow upon it. And if we did so we should learn that its general constitution had been influenced in certain ways that had rendered its surface susceptible; and, moreover, we should learn how to prevent the loaf from growing mould, and how to get rid of the mould once it had appeared. We should neither spray the fungus itself with carbolic, nor should we rely upon merely scraping it off or destroying it. We should know that after these methods had been adopted, the mould would soon show itself again. We should, if we acted rightly, alter the constitution of the whole lump, if we could; but to be more sensible still, we should prevent mould from growing by placing the loaf under such favourable influences as would forbid the rooting and growth of fungus upon it.

A child can be brought up under such circumstances as will render its surface unfavourable for the growth

of any fungus. Its general health can be kept up to such a pitch of excellence that no parasite can find a hospitable lodging there. And suppose a child to have been so neglected in respect to its general health that fungus does take root, then it is obvious that the very first thing necessary is a treatment for this constitutional derangement. The fungus itself may also be killed *in situ*, of course, but this should certainly be a secondary procedure.

The question has been raised whether ringworm can be contracted more than once: cases are recorded which show that it can. This one would have expected who was of opinion that the soil favourable to its growth is produced by a certain dyscrasia. The same derangement of the health likely to induce ringworm may return, although the time requisite for its development and the *age* of the patient will render this extremely unlikely.

Aldersmith mentions the case of a girl who had a small spot which remained about the same size for two years, and then suddenly enlarged rapidly. The explanation of this seems to be that the girl's general health was only sufficiently deranged to allow the local fungus to develop to a certain extent, and after this the dyscrasia remained stationary. Then at the end of two years the dyscrasia exacerbated and the ringworm spread. Aldersmith emphasises the fact that the small stationary spot was only treated for a time, and then left alone for a long period until the moment that it began to spread. If the dyscrasia had been much more pronounced, the spot would have

spread, not remaining *in statu quo* for two years. There was just enough for the fungus to take limited root and no more, and if the dyscrasia had been treated this case would have been well in a week or two.

I would urge upon the reader this point: that it is possible for a very fine balance to exist between the dyscrasia and the powers of the parasite: a point could be reached where the dyscrasia was only sufficiently strong to keep a small patch living and no more. In fact my observations have led me to believe that the dyscrasia can be strong enough to grow a small spot, and may then weaken down considerably, leaving the spot stationary, but not quite allowing it to die. Hence my treatment of ringworm does not finish with the administration of medicines to correct the dyscrasia, as some might at this stage be imagining, it also includes a *simple* local application for the fungus itself, which appears necessary on account of the possibility of only a slight recession of dyscrasia with corresponding latency of the fungus.

I have never experimented quite so far as to prove it, but I am of opinion that ringworm may be cured by internal medicine alone, however. I have not proceeded to this extent of local disregard, in my study of the affection, because I have worked in general practice, where one has to administer object lessons to parents as well as cures to patients, and where I have had very particular reasons for getting my cases well as quickly as possible. I have frequently cured impetigo, however—even very bad and

extensive cases—without the use of any local application beyond poultices or oil, which have been applied in order to get the crusts off, in addition to sufficient and suitable ablutionary agents to keep the head fairly clean. Though I must confess that I prefer to use some simple ointment, as a rule, even for this affection.

On glancing over some of Aldersmith's tables one cannot help being struck with the number of years that some children have suffered from ringworm. He mentions 56 whom he saw after their having had the affection for 2 years; 24 had suffered for 3 years; 13 for 4; 3 for 5; 3 for 6; 2 for 7; 2 for 8; 1 for 9; and 1 for 10. Is not this record simply appalling?

Now, one has come across instances of various other diseases that have belonged eminently to the curable order, but which have endured many years of treatment at the hands of many physicians, notwithstanding. These periods of many years may have been reached on account of diverse reasons. In the first place, the type may have been unusually obstinate and one that tended to relapse. Secondly, possibly the professional advice given during the period may not have been sufficiently skilled. Thirdly, though the advice may have been of the highest, the patient or friends may not have carried out all instructions properly. But before such diseases had existed many years, however, in a large number of instances, sufficient advice of the right kind would certainly have been obtained, whether in a hospital or in some West-end consultant's room, were the patient one from the country

or from the East-end. We might safely say this: Whatever may have been the ultimate result in a few isolated examples of suffering for a prolonged period from any other disease than ringworm, there is not one affection that presents such apparent chances of ready cure—judging simply from the situation of the affection, and from the seemingly superficial and elementary nature of it—and at the same time shows such monuments of failure in treatment, as ringworm. The instance given of ten years is a remarkable exhibition of failure in all truth—and no doubt the affection in this case ultimately disappeared of itself, after having been very severely treated locally, and perhaps also internally, by innumerable strange concoctions and nostrums, without any effect.

After making a study of the literature of ringworm, and noting the stupendous records of failure to be found therein, I cannot help but deplore the fact that lenses and microscopes were ever brought on the scene, inasmuch as they appear to have deflected the attention of observers from what appears to me to be of quite the first importance. All the systems of cure more recently in vogue among specialists have been, and are still, successful in some cases, either in spite of states of general ill-health—which have not been in the least recognised, or which have not been properly treated on being recognised—or because they have created such local changes in the soil, by their drasticity, as have put to death all fungus growth there. But, whatever these systems have been, they have not cured ringworm in the way it ought to be cured—as

so many years of suffering have too clearly shown in those cases of failure after exactly the same kinds of treatment have been adopted.

If we aimed at curing signs and symptoms only, we should get on very badly in our treatment of most diseases. If we treated epileptic fits for instance by merely administering chloroform immediately on the patient's falling, we should do very little good in the end. But one could conceive it possible to chloroform and chloroform until we cured epilepsy, if by so doing a patient's constitution would become so transformed that the nervous system would no longer develop such "storms." And so it may be possible to croton and croton until the kcrion formed kills the fungus.

It has often been suggested that the administration of one affection might possibly cure another, and in some of the treatments now in favour with experts against ringworm we have examples. Attacking local manifestations themselves by ordinary methods has so repeatedly and persistently failed, that, in despair, some other irritation or affection has been introduced as an antagonistic occupant of the same seat, which has proceeded to make the situation unbearable, as one might say.

The short chapters of standard works on ringworm, headed, "How long will ringworm take to cure," make instructive, if pathetic, reading. One author writes: "The time it will take for any given case to get well depends chiefly upon the extent of surface involved and the treatment adopted." Nothing could be more true; and it was scarcely necessary to point

out this quite seriously? However, one is considerably relieved on reading further on that "if the fungus spreads slowly it indicates only a slightly favourable soil; but if it spreads, and places rapidly develop over the scalp, it is due to the general nutritive condition furnishing a favourable nidus."¹ This denotes the full recognition of the influence of soil; and, further, one feels inclined to be persuaded that the author attributes the tendency to ringworm to some state of the general health, even after having expressed an opinion in a previous paragraph that the general health has "nothing to do with ringworm!"²

If by "general nutritive condition" the author means the state of the general health, then he clearly and absolutely contradicts himself. I should not opine that such a contradiction denoted carelessness, or that it indicated want of consistency; I would look upon it more happily than this, and say, that in spite of the observer's fundamental conviction that the general health has nothing to do with ringworm, he was impelled on certain occasions to the belief that it had; in short, one set of investigations deemed for the nonce by far the more important must have driven him to one dominant conclusion, while another set converted him, incontinently, on another occasion, to quite another conviction.

There has been a good deal of difficulty experienced by practitioners in deciding whether cases of ringworm are cured or not, after perhaps months or years of

¹ "Ringworm," p. 59.

² "Ringworm," p. 40.

treatment; and there is no wonder. I have found, however, that there need be no anxiety if, after my treatment, a patient shows signs of getting well *generally*, as well as locally. If a general improvement is seen to have started, and the treatment is kept up for a little time, the fungus will not grow again, and it need never even be examined for. Once it is seen that an all-round change is taking place, there need be no fear. But the treatment, both by drugs and by the adoption of certain principles of living must be just the one to suit the case.

By treating the general health in particular, as I have been in the habit of doing, and by paying very little attention to local manifestations, I have found that the extent of apparent severity of the affection has very little to do with the length of time required for cure; the actual state of the parts practically only indicates the degree of the impairment that the general health has sustained. I have found some of the very worst cases cure as quickly as very slight ones. Of course the hair takes longer to grow, and the skin will show signs of former injury for a longer time in the former; but the rapidity of change from the active, encrusting, or even suppurating forms of ringworm to the obvious and rapid stages of healing, has sometimes been quite remarkable.

One cannot help wondering how it is that those who have worked so much amongst ringworm, and who have observed so well certain cases of spontaneous cure, have not thought of the great probability that the state of the general health was lying at the

bottom of the whole mischief, and that they have not researched in this direction. It passes my understanding. Aldersmith has referred to certain cases that have been incurable; the patches having been too extensive for the use of croton oil! But he remarks: "Even these forms generally get well soon after fifteen or sixteen years of age." Further, he writes: "Cases appear—with all our recent knowledge of the different species of fungi—to be utterly incurable, until kind Nature takes them in hand about puberty, when, without treatment, they get well." I should have thought that this one fact alone would have suggested the putting away altogether of lens, epilatory forceps, and croton oil, and have prompted an observer to study soils and their genesis. I myself have never possessed a pair of epilatory forceps; I have never owned a lens for examining ringworm; I have never used more than one of the very simplest ointments locally; yet I have had unbroken success in the treatment of this affection, and sometimes I have been able to show what others would describe as miraculously rapid cases of cure.

Some observers have considered that they have at length found the proper treatment for ringworm to be the rubbing-in or application locally of something *quite simple*. Dr. George S. Perkins, in the *Lancet* of October 22nd, 1898, wrote the following: "For the past fifteen years I have treated every case of ringworm which has come under my care with chloride of sodium and with complete success in every case. The first case in which I adopted this treatment was a

chronic one of five years standing. The child was well in three weeks and had no return. Many of the cases which I have attended since have been of a chronic character. The method I adopt is the following: Have some chloride of sodium finely powdered and then mixed with a little vaseline to make an ointment. The affected part having been shaved, rub this ointment in well night and morning until the place is sore; this takes from two to four days. Then apply some simple application to aid the healing of the part. When well from the soreness, the hair will be found growing healthily and the tinea trichophyton destroyed."

I do not for a moment believe that these simple treatments have done any more towards effecting a cure of themselves than others more elaborate. I feel sure, however, that they have done less injury. Something else has "done the trick."

It would serve no good purpose if I criticised the various methods of treatment for ringworm that have been adopted during the past two or three decades, or if I even mentioned the multitudinous and diverse agents that have been employed. Almost every means short of scalping and flaying has been tried. But such a record of failure as is shown by Alder-smith's tables, and by the lists of heroic, drastic, and almost terrible remedies that one may draw up from most treatises, should open one's eyes and make one alive to the fact that there has been something wrong with our methods of attack. There is no such record of failure to be found in the whole history of medicine

and surgery, if we take into account the comparatively simple nature of the affection.

And this failure, I have no hesitation whatever in considering, has been due to the fact that the procedures or methods energetically directed against local signs have happened to be just those that were favourable to the existence or constancy of the underlying dyscrasia. Heads have been treated while bodies were isolated and put under a régime that encouraged the dyscrasia. Hence we have had recorded so many cases lasting years.

Nothing could be worse for patients suffering from ringworm than isolation—though nothing could be better for the sake of others who are not suffering. As has been previously pointed out, the method of segregation and exile from the gambols and pleasures of childhood that has been found necessary to adopt by so many advisers has resulted in most instances in simply feeding and fostering the ringworm dyscrasia. Therefore it follows that one of the chief things to be aimed at in the treatment of ringworm should be the placing of an afflicted child in such surroundings as would insure a healthy and cheerful mind—as far as this could be possible in conjunction with measures designed to prevent any spread of the affection. If a child must be separated from others, then such change and amusement should be found for it as compensate for the loss of the bright companionship of kindred spirits.

The daily routine of a patient should be of the healthiest possible. Food must be of a suitable and

appropriately supporting order, while everything should be done to promote healthy appetite. Plenty of exercise is necessary; not merely walking-out exercise, with a dull nurse or with some one uninteresting, but outings with an object, varied with games that cause laughter and good spirits—always remembering that the mind influences the body and has a remarkable effect on dyscrasias of most kinds. Sufferers should never be accounted a nuisance; those frowned at and neglected, as troublesome and aggravating, will have the poorest chance of getting well.

A change of air is generally beneficial, if it is accompanied by a healthy routine and a happy state of mind; but it will not help at all otherwise. Children have been sent to the sea, in charge of some one, and have derived no benefit—simply because their complaint has necessitated separation from other youngsters, and because they have gone away to a life of monotony and misery. Others have been sent to farms with similar results.

It is not the place but the régime that determines the effect. Erasmus Wilson used to send cases to a village near Epping Forest. The consequence was that this village soon became known as a part of the country that of itself was favourable to the cure of ringworm. Having lately met, on my professional journeys, the mother of a lad who was once sent by Erasmus Wilson to this particular village, I took the opportunity of ascertaining all I could regarding the opinions of both Erasmus Wilson and others concerned.

The mother informed me that this eminent physician considered Buckhurst Hill and Woodford to be good places for cases of ringworm to reside. After consultation with her husband it was decided that they should all live at Woodford permanently. Their boy soon got well. The mother was ordered to give him plenty of bacon fat, ale for breakfast and supper. He was also to take bread and cheese. His head was to be washed daily with soft soap and water and afterwards brushed with a hard brush until the skin was quite sore, and it mattered not even if it bled. The boy was also to live in the open air as much as possible.

Such was the treatment advised. Whether Erasmus Wilson considered that there was anything peculiar about the air near the Forest is not known, but the mother of the boy referred to above thought there must be, and she said others thought so too. It will be observed that the boy was not sent away to strangers; he had no uninteresting keeper or nurse; he lived happily with his parents. Ale and fat bacon would appear to have improved his general health, but it was undoubtedly more the altered régime—which created good appetite, good spirits, and better developing forces all round—that permitted food and drink to do their work. He could run about in the open air and roam in the Forest without being subjected to the unpleasant scrutiny of curious and uncharitable observers. There was no occasion for unhealthy isolation, and no limitations were placed on public appearance, to make life wretched.

How shall we finally view cases of spontaneous cure? How shall they be further explained? Some of them I believe have merely come under the influence of the gradual changes of time—hardly to be named or described. A growing age tends to eradicate certain dyscrasias, and it doubtless does so through not only the changes in physical development brought about, but changes in mind and disposition also, resulting in new thoughts and energies and a different life being led altogether. An afflicted child of five or six will perhaps have been kept very close at home for a year or more, but approaching seven or eight, its disposition will lead it to departures that are more healthful, while, probably, parents have at the same time grown more lax as regards restraints, in their despair, and will be allowing the youngster rather more liberty.

No doubt some cases of spontaneous cure have come under certain other influences of various kinds, which, working together, have altered the state of the general health. A hardening against imprisoned circumstances, or an acquired regardlessness of miserable conditions, some such change of disposition may have helped towards the cure of some. Visits to specialists, other doctors, or quacks, as the case may be, have resulted in very many cures, especially when some distance has been travelled on several occasions;—not always because of any particular remedy that has been used, but often in spite of it. Children have frequently been sent away to some town or other in order to stay a while and be treated by another

doctor. In many such instances it has been supposed that the new doctor has cured the affection, while in reality the happy and delightful change, amongst kind and sympathetic relatives or friends, to fresh air and different food, to new pleasures and fresh scenes, has done the whole thing.

A mother once brought her child to me for advice regarding ringworm which had existed a little over twelve months, in spite of various treatments carried out during the whole period. After examination I thought the case would do well and cure rapidly under Syr. Ferri. Phos. Co. and a little Ung. Hydrarg. Ammon. rubbed in twice daily for a few days. The unintelligent mother obtained one supply of these agents, but was not altogether impressed with the great hopes I gave her: they had been far too sanguine evidently, and the general directions had no doubt seemed too simple to have any value. I also told the mother to send the child away for a change, considering that the dyscrasia was the result of some disadvantageous mode of life it was living; whereupon she replied that she had already arranged to do so. The child took one small bottle of medicine and had the ointment rubbed in for only three days. Then the mother suddenly gave way to another fit of despair, believing that it was no use doing anything further whatever, at the direction of anyone. She gave up all remedies. In about two weeks she saw that the child's head was improving, and in three she thought that it was rapidly getting well. After a time all was hair. I only saw the child once. I met

the mother some months afterwards and obtained full particulars. This time she was firmly of the opinion, on "looking back," that "the *one* box of ointment did it." "I saw an improvement in two weeks," she said.

Now, what had been mainly instrumental in effecting a cure in this case? It was the simple fact that the child was removed to a congenial and healthy environment. No doubt the medicine had also helped at the very beginning to cure the dyscrasia, and the ointment may have done some little good also, but the new régime would in my opinion have effected a complete cure alone, in this particular case.

Considering that the influence of the general health has been so discounted by many authorities, there can be no wonder that nothing very valuable or definite has ever been advanced concerning the administration of medicine internally. Iron and cod-liver oil for the strumous and pale is about as far as the best authorities have taught; not that these agents have been ordered as an express treatment of the fungus dyscrasia; they have been "thrown in," as it were, desultorily and half-heartedly, rather because such concomitant states of the general health have appeared to demand them in any case; not because they were supposed to be capable of doing any particular good against ringworm, but because it has been thought advisable that any other condition should be treated at the same time.

Moreover, accompanied by a régime which of itself

influenced the general health for the worse, medicines of a tonic nature have often been found by observers to do no good, naturally. If one isolate and give iron, the patient will not have the same chance as when under iron and even *fairly* healthy circumstances of living. Cases have been seen where tonics have been administered for months and even years, and no improvement has been effected, because the sufferers have been placed under such a régime at the same time as has defied medicine, even when the kind administered has been changed frequently, and when cod-liver oil and various preparations of malt and oil have been given as well. Such results, after such measures, have caused the faith of many a painstaking practitioner to be shaken, naturally, and have even led some to abandon ringworm as a malady beyond all human control.

There is a *vis medicatrix naturæ* which can accomplish great things if it is allowed. Even iron cannot do everything; it must have some help from nature. For the rapid cure of ringworm it is necessary that these two agencies be worked for all they are worth, hand in hand. Local treatment should be attended to quite secondarily. The dyscrasia should be combated first, and its sign on the scalp *helped* out of the way by one of the simpler applications at leisure.

I consider that patients suffering from ringworm should be thoroughly examined for the purpose of correctly diagnosing the dyscrasia, not that the presence of the latter may be doubted for a moment, for I account the local affection pathognomonic of the

dyscrasia, but that the exact nature and complications of the dyscrasia may be accurately determined. We should ask ourselves, how did it ever come into existence? With what diathesis is it complicated? How has it been modified? It can only be after such a study that we can arrive at a treatment likely to be rapidly effectual in each case.

If the dyscrasia be ordinary and uncomplicated, the placing of the patient under an all-round healthy régime, the administration of some form of iron, or if necessary malt and oil, and the application of something simple locally, will effect a cure. But a fair knowledge of what constitutes an all-round healthy régime is necessary: this point must be fully appreciated. The accurate and minute history of the patient will give indications for guidance. It is not sufficient to learn that the patient "goes out every day," or that a good appetite exists, or that good spirits prevail: these evidences must be further fathomed.

And there is iron and iron. Confusing and disappointing results are often obtained in dealing with not only ringworm but many other affections, because either the right preparation or a proper quantity has not been given. There are some who might imagine that one cannot get far wrong with Syr. Ferri. Phos. Co., that this form is always sure to be right for children. The fact is, however, that this compound varies as much in its quality as do many wines. Pints of medicine may be given, but if the quality is not good no satisfactory result will follow. Genuineness

is not shown by appearance and taste only. The same applies to malt and oil preparations.

In the majority of cases of ringworm I have found no form of iron more suitable than Syr. Ferri. Phos. Co., of the very best quality. It is quite a specific for fungus dyscrasia—but it must always be given in conjunction with an adequate régime for each case.

On the subject of local applications I have very little to remark. They need only be quite simple: this is the most important, and perhaps to some the most startling, statement it is necessary to make. More often than not I order a little Ung. Hydrarg. Ammon. to be applied to the patches twice a day. But I always show how this ointment should be applied. The mother should have the red rings pointed out to her, if there are any, and should be told to pay attention to these only. She should be instructed to take a little of the ointment on one finger and then to trace out the rings carefully, pressing on them round and round, so. "You will soon rub the rings away," I often tell them. If there are no rings the ointment should be rubbed well on the periphery of the patches, and afterwards all over if it pleases the mother. But I have found that where no ring or reddened periphery can be distinguished there is scarcely any necessity for local application at all, and I do not give very express instructions as to method of applying in such a case. Dyscrasia treatment cures these readily—more readily than it does others.

Very little need be mentioned regarding the treatment of impetigo. It is generally quite fully recog-

nised that the general health of sufferers had better be treated. One of the reasons why this affection has been considered to be more dependent on the general health is this: it is almost exclusively found in children of the poorer classes who have been subject to neglect and bad feeding. And a larger percentage of children afflicted appear to be suffering from debility than can be found amongst those having ringworm. "Pink of health" instances are practically unknown amongst children suffering from impetigo.

It is an instructive fact, moreover, that impetigo yields very readily to treatment. Practitioners have not any one, two, three, four, or seven-year cases of the affection to record. It is commonly believed that this readier yielding to treatment is simply due to the nature of the affection, but I consider that it is due to the treatment itself. I have found that cases of ringworm cure as quickly or nearly as quickly as bad cases of impetigo, when the dyscrasia has had the fullest attention.

I am of opinion that if all cases of ringworm were treated strictly as though they were cases of impetigo—in method and in proportion—they would be cured infinitely more quickly than by most of the elaborate and drastic local methods employed alone; in fact experience has shown me that, as regards a particular class of patient—the poor, ill-nourished, unhappy-homed—the treatment for impetigo and ringworm may sometimes be exactly the same, and the best results will be obtained in either case.

I refer above to treatment "in method and in proportion." It is as well that the meaning of this should be perfectly understood. I consider that both ringworm and impetigo should be treated mainly through their dyscrasias, the local measures only requiring to be simple and merely auxiliary. According as the dyscrasia may appear to have been influenced by one thing or another, or according as it may be complicated by any diathesis, the treatment may be regulated.

I lay stress on the word "proportion," for it will be instantly understood that a treatment designed to improve the general health of a poor-class child will not be likely to do the same degree of good in a child suffering from ringworm belonging to well-to-do parents. It will generally be necessary to treat dyscrasias of *any* kind that occur in patients of the latter class by means of an entirely different régime. And perhaps even the medicines would have to be different: I have found that iron preparations are taken with fewer untoward effects, and with more positive results by the poor than by the rich, the digestive tract of the latter being oftener out of order.

Turning to the treatment of favus, it is interesting to note that Malcolm Morris makes no reference to treatment of the general health in his work on "Diseases of the Skin," while Jameson writes thus: "In treating favus there is more need for attention to the general health than in ringworm. Iron, cod-liver oil, and the phosphates of lime are the remedies in-

dicated, but these are mere auxiliaries to the real cure." My own experience in the treatment of this disease has been a mere fraction of that obtained amongst ringworm and impetigo, and therefore I am really only entitled to lightly theorise regarding it.

Considering that it is one that depends for its existence just as much upon a dyscrasia as do other fungus affections—if not more so—and Jameson's advice itself suggests this, I am of opinion that a proper adjustment of remedies and régime to meet the dyscrasia of every particular case is the right method to be adopted, and that, as with ringworm and impetigo, the local measures need only be simple. The question of diet I lay great stress upon, as one would judge from the view I have given respecting the etiology of the affection.

It is a well-known fact that cases of alopecia areata and seborrhœa frequently get well of themselves, that is, without any local or general treatment whatever. In such instances certain forces have operated, unquestionably, but not any that have been designed or even perceived. The circumstances that have produced the requisite dyscrasias have become so changed, that they have been starved out, so to speak, and their local signs after them. The only treatment that can be of any real value for these affections is one to be directed against the general health, and particular attention must be bestowed on mental states or idiosyncrasies.

It seems almost idle to repeat the same story, regarding treatment, in the case of sycosis and tinea

barbæ. Jameson again helps my dyscrasia theory in the directions he gives as to treatment, in his work on skin diseases. He writes: "The character of the complaint is obstinacy, and there is a constant danger of relapse after apparent cure. Hence no promise of a speedy cure should be made. While the general health needs attention, and in particular rest from anxiety should be obtained, if possible, or an entire change prescribed, the only medicine of value is cod-liver oil in full doses." Again, by the way, in dealing with this affection also, Malcolm Morris makes no reference to any treatment of the general health in his work.

In looking over the works of various authors, it is extremely instructive to note that the term "obstinacy" has been applied to those affections dealt with in the foregoing pages which have been *supposed* to have less to do with any state of the general health than others. When the general health has been taken into account to some extent, as in the case of impetigo, there has followed a greater success in treatment.

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